RESOLUTION NO. 95-0979

RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF SACRAMENTO, STATE OF CALIFORNIA AMENDING THE SACRAMENTO COUNTY GENERAL PLAN

WHEREAS, the Policy Planning Commission, after proper notice, conducted public hearings and made recommendations to the Board of Supervisors relating to amendments to the Sacramento County General Plan; and

WHEREAS, the Board of Supervisors, after public notice and public hearings, has determined that the General Plan of the County of Sacramento should be amended as herein set forth;

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors of the County of Sacramento does hereby amend the County General Plan, as amended, to include the following (Exhibits "A" through "N" correct errors and omissions that have been identified since adoption of the updated General Plan on December 15, 1993; Exhibit "O" reflects approval of a private application in the vicinity of the City of Galt):

Exhibit "A": Corrected wording for Land Use Element definition of "Medium Density Residential".

Exhibit "B": Corrected wording for Land Use Element definition of "High Density Residential".

Exhibit "C": Corrected wording for Condition 5 of the Land Use Element Zoning Consistency Matrix.

Exhibit "D": Correction to the Land Use Element Zoning Consistency Matrix regarding multi-family residential zoning and consistency with the Commercial and Office land use categories.

Exhibit "E": Correction to the Land Use Element Zoning Consistency Matrix regarding MP zoning and consistency with the Commercial and Office land use categories.

Exhibit "F": Correction to the Land Use Element Interim Zoning Consistency Matrix regarding multi-family residential zoning and consistency with Mixed-use land use categories.

Exhibit "G": Urban Streams to be added to the Land Use Diagram.

Exhibit "H": Correction to Land Use Diagram, north of Calvine Road and east of Waterman Road, in the Vineyard community.

Exhibit "I": New High School in Elk Grove Urban Growth Area to be added to Land Use Diagram.

Exhibit "J": Correction to Land Use Diagram in Antelope Area.

Exhibit "K": Additional wording for Policy CO-96 of the Conservation Element.

Exhibit "L": Change in wording for Figure 1 of the Open Space Element.

Exhibit "M": Appendices to the Noise Element.

Exhibit "N": Correction to the Land Use Diagram, on the east side of Hazel Avenue and the north side of the American River, in the Fair Oaks community.

Exhibit "O": Amends the General Plan Land Use Map to change the land use designation from General Agriculture (20 acres) to Agricultural-Residential for 27+ acres of real property described as portion of Assessor's Parcel 148-0051-046 located on the west side of Hauschildt

Road, approximately 500 feet north of Twin Cities Road, in the Southeast area of Sacramento County.

BE IT FURTHER RESOLVED that Exhibits "A" through "O" are hereby incorporated into and made a part of this Resolution amending the General Plan of Sacramento County.

On a motion by Supervisor Cox, seconded by Supervisor Nottoli, the foregoing resolution was passed and adopted by the Board of Supervisors of the County of Sacramento, State of California, at a regular meeting thereof this 16 day of August 1995, by the following vote, to wit:

FILED

AUG 16 1995

BOARD OF SUPERVISORS
BY Cindy Holloway
CLERK OF THE BOARD

AYES: Supervisors Cox, Nottoli, Johnson
NOES: Supervisors None
ABSENT: Supervisors Collin, Dickinson
ABSTAIN: Supervisors None

Muriel L. Johnson
CHAIRMAN OF THE BOARD OF SUPERVISORS
OF SACRAMENTO COUNTY, CALIFORNIA

(SEAL)

ATTEST: Cindy Holloway
CLERK OF THE
BOARD OF SUPERVISORS

In accordance with Section 25103 of the Government Code of the State of California a copy of this document has been delivered to the Chairman of the Board of Supervisors, County of Sacramento on

AUG 16 1995

By Connie M. Fillman
Deputy Clerk, Board of Supervisors

Land Use Element: corrected wording for definition of
Medium Density Residential

"Medium Density Residential. The Medium Density residential designation provides for areas of attached units, including apartment and condominiums, along transit corridors and through the urban area. This designation establishes urban densities between thirteen and **thirty** dwelling unity per acre, resulting in population densities ranging from approximately 32.5 to 73.5 persons per acre. Medium density development includes apartments, condominiums, and group housing. These uses are appropriate near commercial areas, transportation and transit corridors, and employment centers."

EXHIBIT "A"

Land Use Element: corrected wording for definition of
High Density Residential:

"High Density Residential. The High Density Residential designation establishes areas of higher density units primarily along transit corridors. This designation establishes urban densities ranging between **thirty-one** and fifty dwelling units per acre, resulting in population densities ranging from approximately 75 to 125 persons per acre. High density development includes multiple-floor apartments and condominiums, including mixed-use developments. High density uses are appropriate within the central portion of intensive commercial areas, along transportation/transit corridors and stops, and near major employment centers."

EXHIBIT "B"

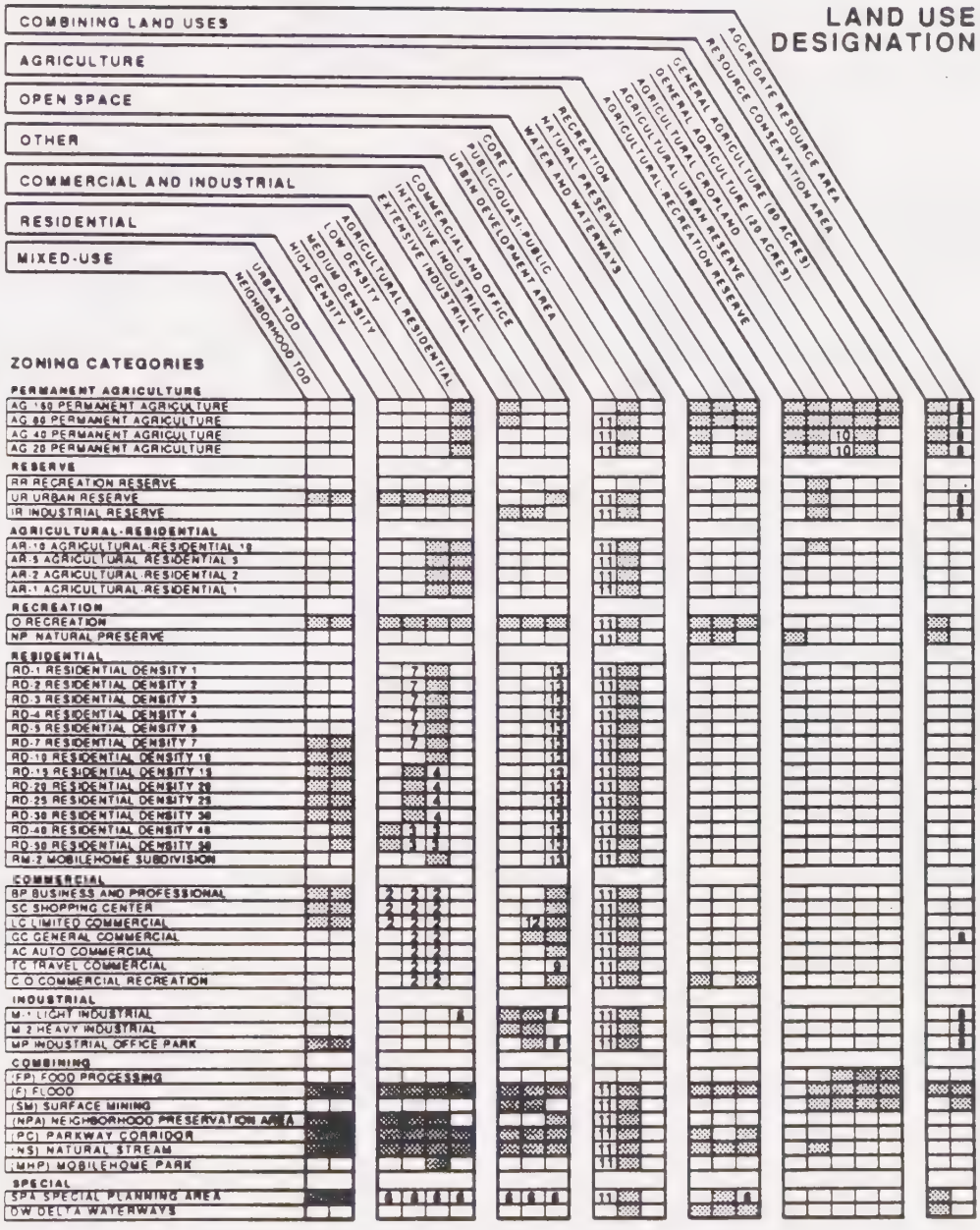
Land Use Element: Zoning Consistency Matrix, Footnote 5, corrected wording:

5. "Areas zoned M-1 that are less than ~~15~~ **two (2)** acres are consistent in the Commercial and Office and **Agricultural-Residential** General Plan designations if they are shown on the Community Plan map, but may not be shown on the Land Use Diagram due to scale considerations."

EXHIBIT "C"

TABLE III.5

ZONING CONSISTENCY MATRIX



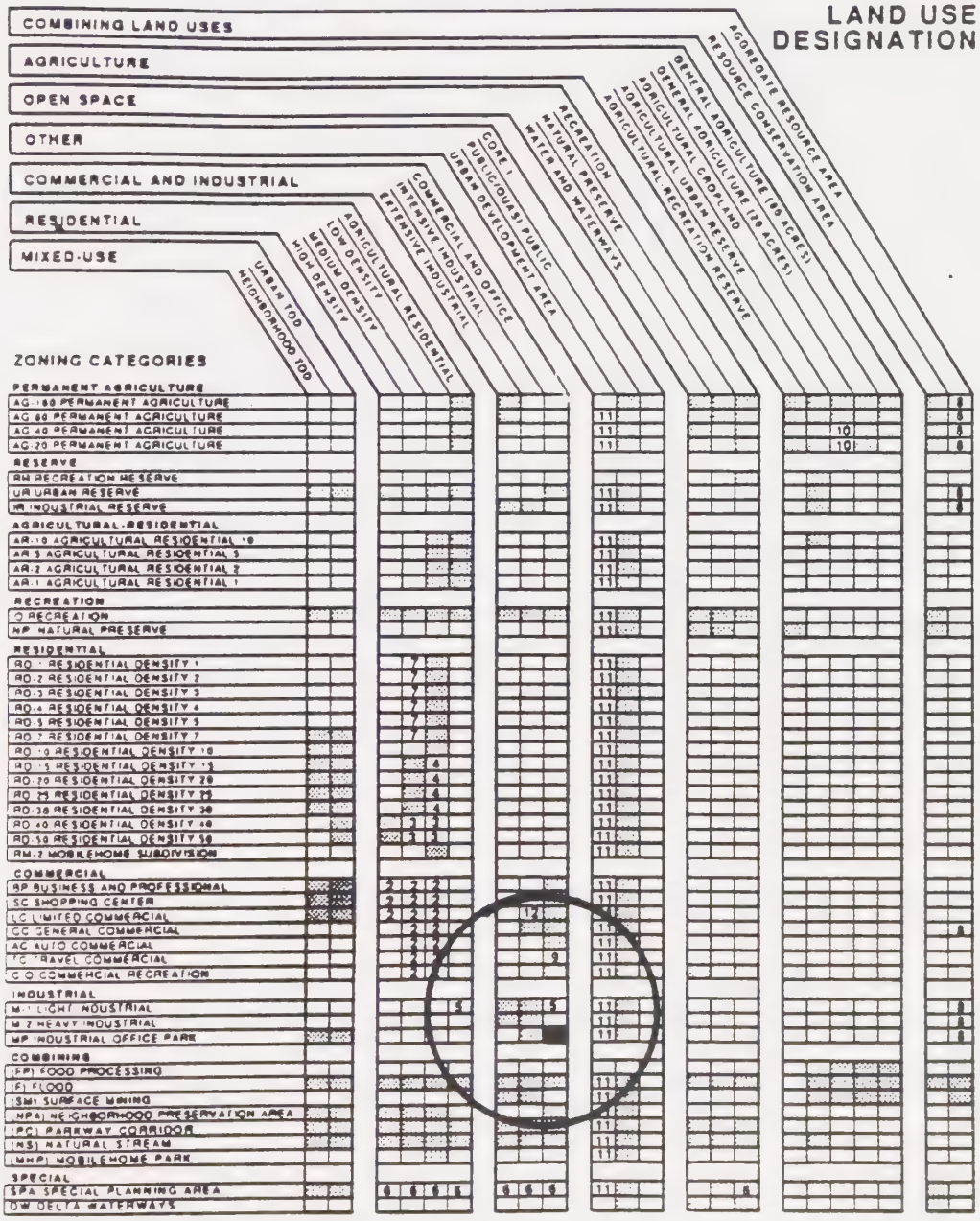
NOTES: Shading indicates that the zoning classification is consistent with the General Plan designation. A number indicates conditional consistency in accordance with the corresponding footnote.

1. The Core Area designation is shown only within the incorporated City of Sacramento and zoning is under that jurisdiction.
2. Areas zoned LC, SC, BP, GC, AC, TC, and C-O that are less than 10 acres are consistent in the High Density, Medium Density and Low Density Residential General Plan designations if they are shown on the Community Plan map but may not be shown on the Land Use Diagram due to scale considerations.
3. Areas zoned RD-40 and RD-50 that are less than 15 acres are consistent in the Medium Density and Low Density Residential General Plan designations if they are shown on the Community Plan map but may not be shown on the Land Use Diagram due to scal considerations.
4. Areas zoned RD-30, RD-20 and RD-15 that are less than 15 acres are consistent in the Low Density Residential General Plan designation if they are shown on the Community Plan map but may not be shown on the Land Use Diagram due to scale considerations.
5. Areas zoned M-1 that are less than 15 acres are consistent in the Commercial and Office General Plan designations if they are shown on the Community Plan map but may not be shown on the Land Use Diagram due to scal considerations.
6. The land uses and residential density permitted in any particular SPA ordinance must conform to the land use categories and policies of the General Plan.
7. Low Density Residential zoning is appropriate in Medium Density Residential designated areas only when needed as a buffer.
8. Consistency in the Aggregate Resource Are designation is determined by the consistency between the underlying General Plan designation and the zoning.
9. The TC Travel Commercial zoning classification is consistent with the General Plan provided there are findings of fact by the Board of Supervisors that the needs of th traveling public justify the zoning.
10. The AG-20 and AG-40 zoning categories ar consistent with the Agricultural Cropland designation provided they meet the criteria of the applicable General Plan policies.
11. All zoning classifications in existence at the time the Urban Study Area designation is applied are considered consistent. Rezones will not be approved until the Urban Study Area designation is removed.
12. Areas zoned LC that are less than 5 acres ar consistent in the Intensive Industrial Gener Plan Designation if they are shown on the Community Plan map but may not be show on the Land Use Diagram due to scale considerations.
13. The residential zoning categories are consistent with the Commercial and Office designation provided they meet the criteria of LU-14 and LU-17.

EXHIBIT "D"

TABLE III.5

ZONING CONSISTENCY MATRIX



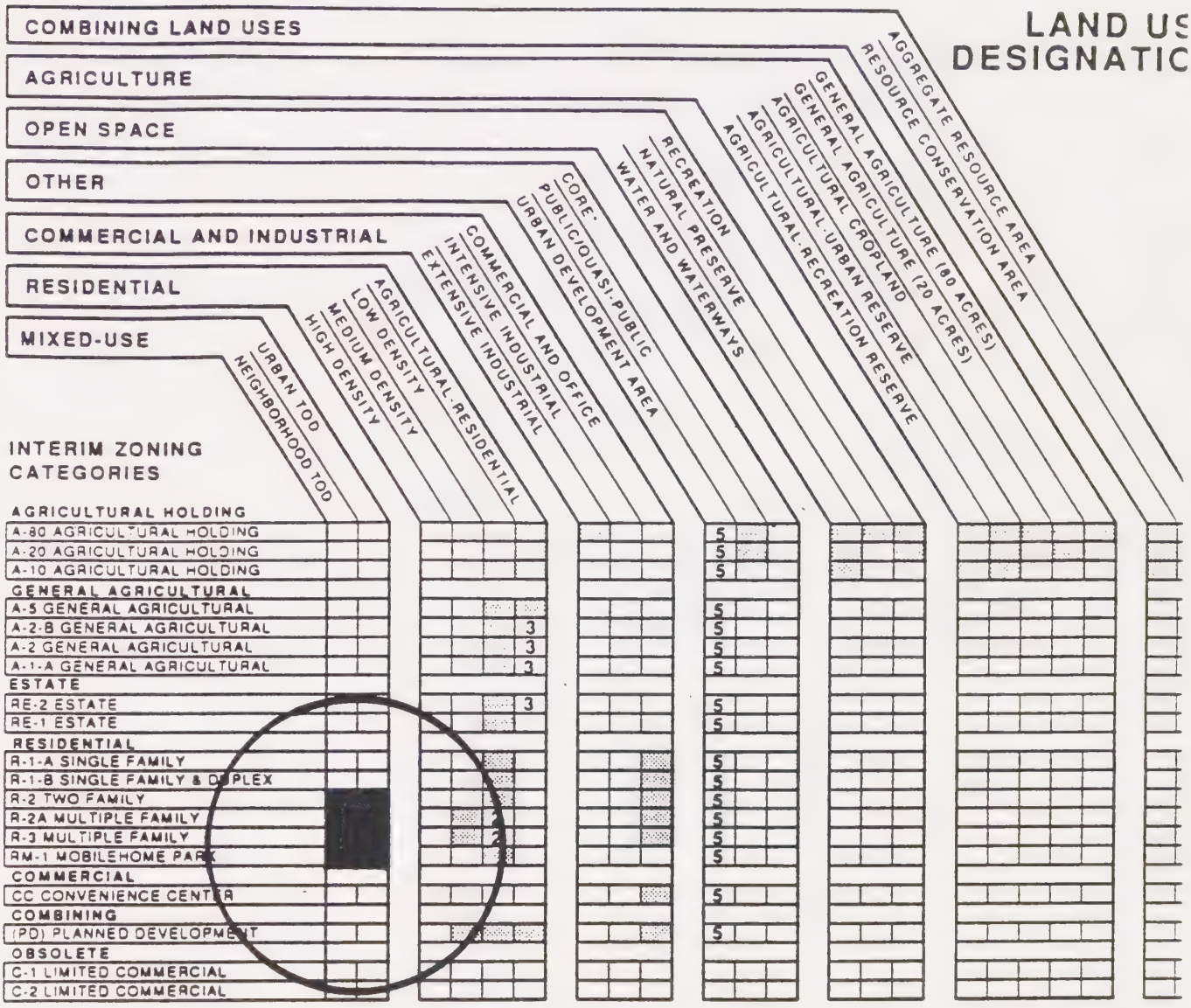
1. The Core Area designation is shown only within the incorporated City of Sacramento and zoning is under that jurisdiction.
2. Areas zoned LC, SC, BP, GC, AC, TC, and C-O that are less than 10 acres are consistent in the High Density, Medium Density and Low Density Residential General Plan designations if they are shown on the Community Plan map but may not be shown on the Land Use Diagram due to scale considerations.
3. Areas zoned RD-40 and RD-50 that are less than 15 acres are consistent in the Medium Density and Low Density Residential General Plan designations if they are shown on the Community Plan map but may not be shown on the Land Use Diagram due to scale considerations.
4. Areas zoned RD-30, RD-20 and RD-15 that are less than 15 acres are consistent in the Low Density Residential General Plan designation if they are shown on the Community Plan map but may not be shown on the Land Use Diagram due to scale considerations.
5. Areas zoned M-1 that are less than 15 acres are consistent in the Commercial and Office General Plan designations if they are shown on the Community Plan map but may not be shown on the Land Use Diagram due to scale considerations.
6. The land uses and residential density permitted in any particular SPA ordinance must conform to the land use categories and policies of the General Plan.
7. Low Density Residential zoning is appropriate in Medium Density Residential designated areas only when needed as a buffer.
8. Consistency in the Aggregate Resource Area designation is determined by the consistency between the underlying General Plan designation and the zoning.
9. The TC Travel Commercial zoning classification is consistent with the General Plan provided there are findings of fact by the Board of Supervisors that the needs of the traveling public justify the zoning.
10. The AG-20 and AG-40 zoning categories are consistent with the Agricultural Cropland designation provided they meet the criteria of the applicable General Plan policies.
11. All zoning classifications in existence at the time the Urban Development Area designation is applied are considered consistent. Rezones will not be approved until the Urban Development Area designation is removed.
12. Areas zoned LC that are less than 5 acres are consistent in the Intensive Industrial General Plan designation if they are shown on the Community Plan map but may not be shown on the Land Use Diagram due to scale considerations.

NOTES: Shading indicates that the zoning classification is consistent with the General Plan designation. A number indicates conditional consistency in accordance with the corresponding footnote.

EXHIBIT "E"

TABLE III.6

INTERIM ZONING CONSISTENCY MATRIX



1. As a general guideline the General Plan Diagram will show districts of Commercial zoning, ten (10) acres in size or greater. Smaller Commercial districts within the urban area would not be shown on the General Plan Diagram and thus would be consistent. Applications containing 10 acres of Commercial zoning or more shall require General Plan amendments to the General Plan Land Use Diagram.

2. As a general guideline the General Plan Diagram will show districts of Multiple Family zoning, fifteen (15) acres in size or greater. Smaller Multiple Family districts within the urban area would not be shown on the General Plan Diagram and thus would be consistent. Applications containing 15 acres or more of Multiple Family Residential zoning shall require General Plan amendments to the General Plan Land Use Diagram.

3. The A-2-B, A-2, A-1-A, A-1-B, or RE-2 interim zones are consistent with the General Plan provided the Board of Supervisors has, by resolution, ordinance, or community plan or specific plan established a minimum lot size of less than five (5) acres for a given area.

4. Consistency in the Aggregate Resource area designation is determined by the consistency between the underlying General Plan designation and the zoning.

5. All land use zones in existence at the time of application of the Urban Development Area General Plan category are considered consistent. Rezones will not be approved until the Urban Development Area designation is removed.

• The Core Area land use category is shown only within the incorporated City of Sacramento and zoning is under that jurisdiction.

NOTE: Shading indicates that the zoning classification is consistent with the General Plan designation. A number indicates conditional consistency in accordance with the corresponding footnote.

EXHIBIT "F"

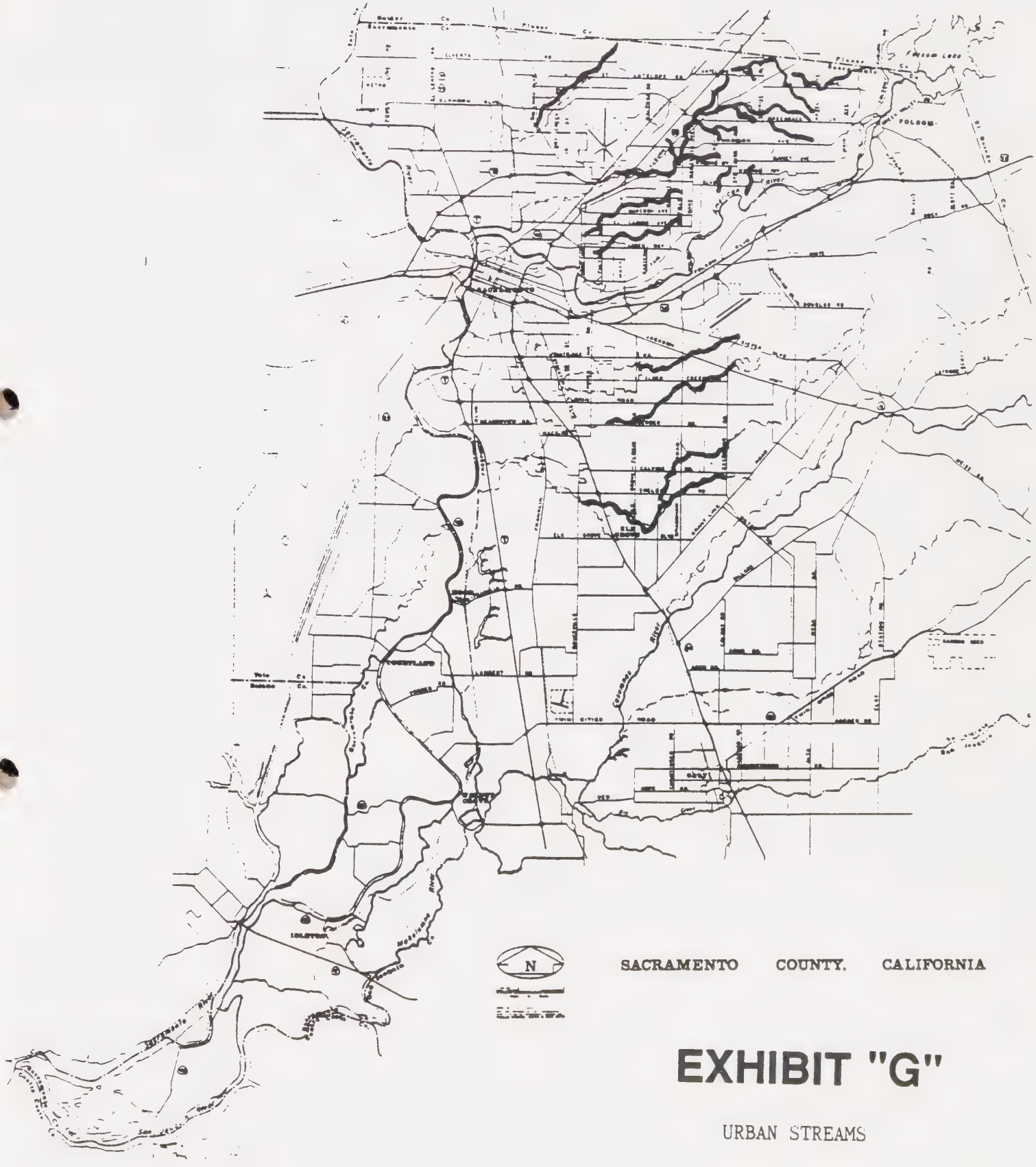


EXHIBIT "G"

URBAN STREAMS

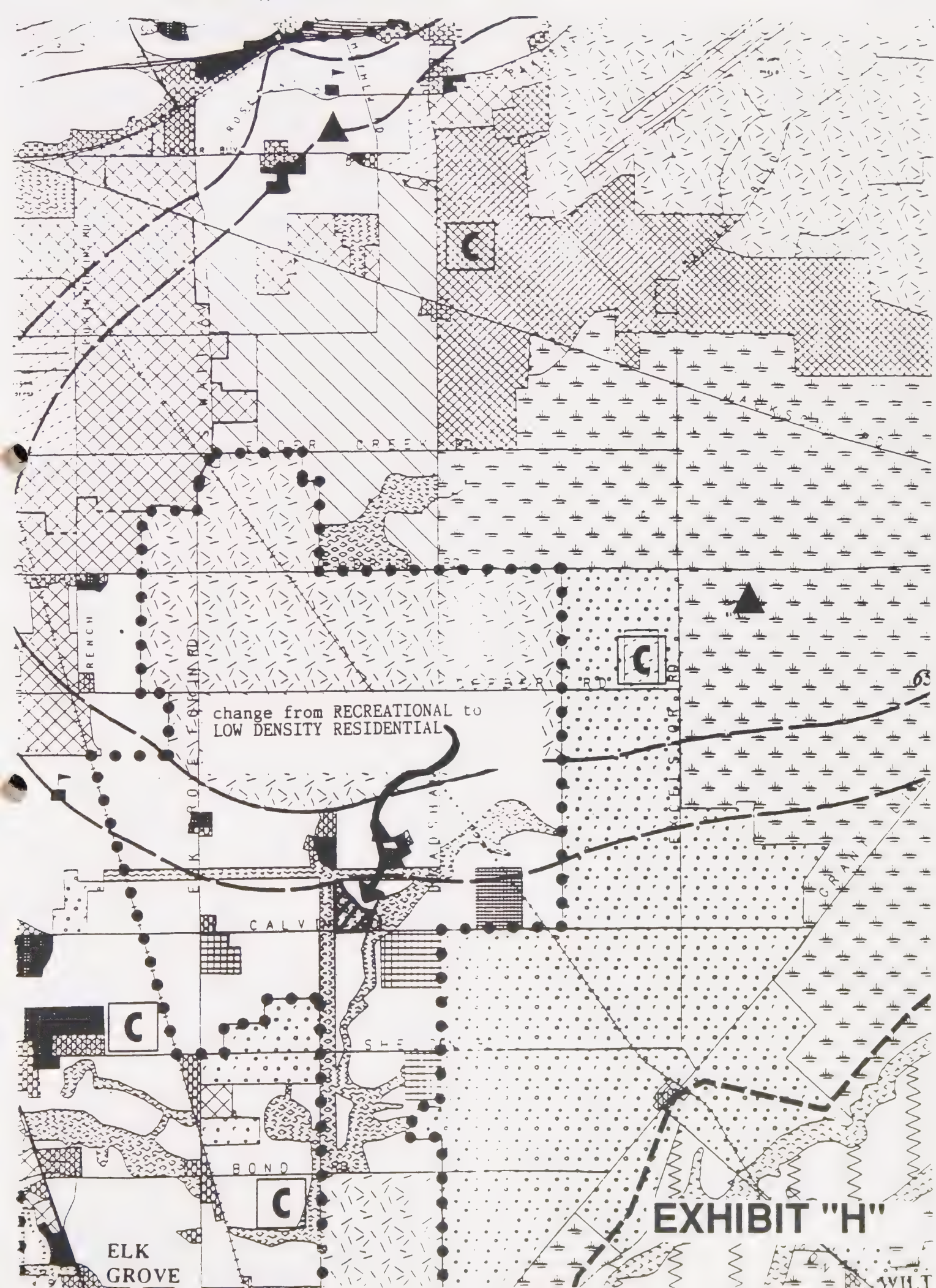
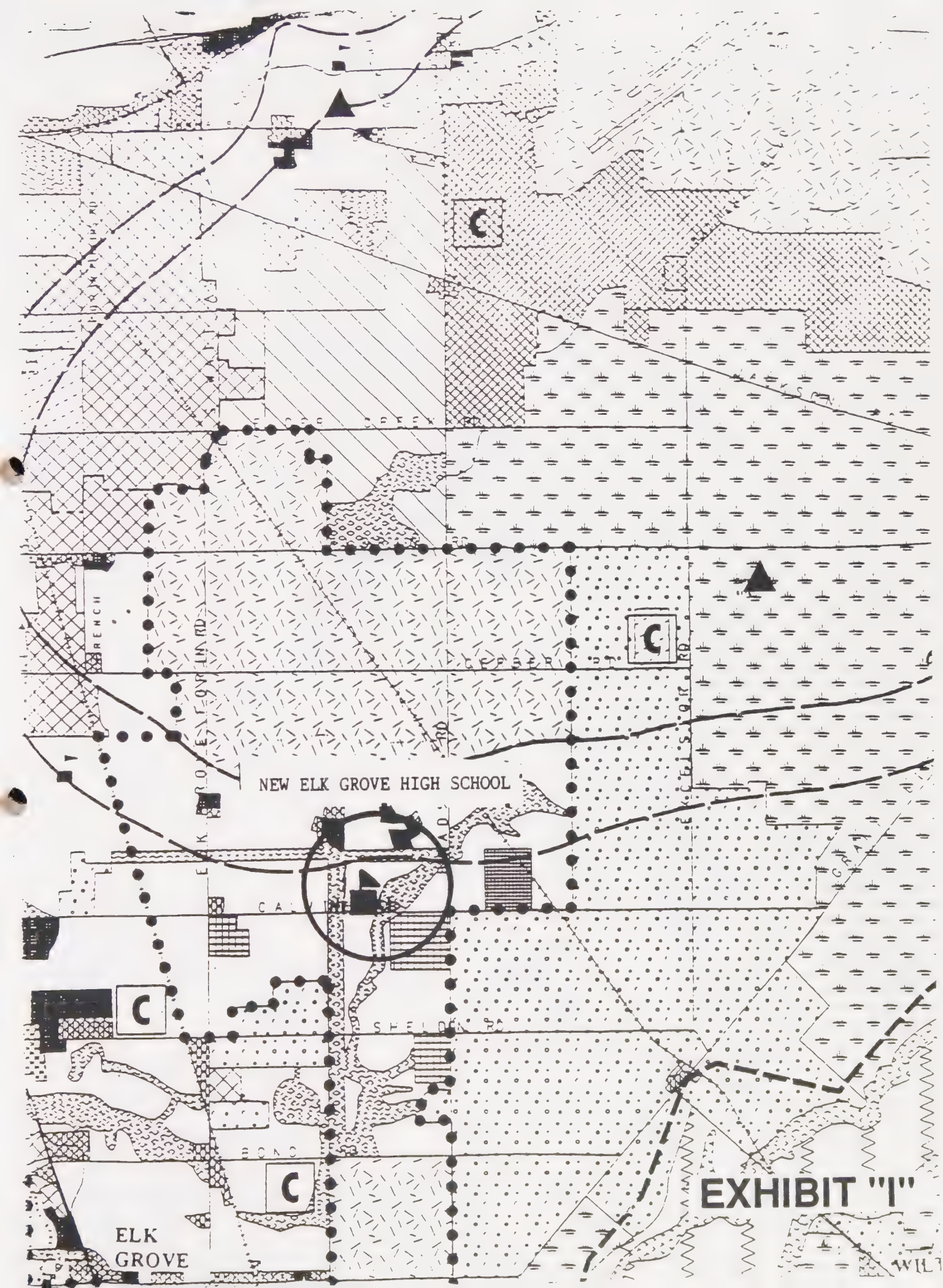
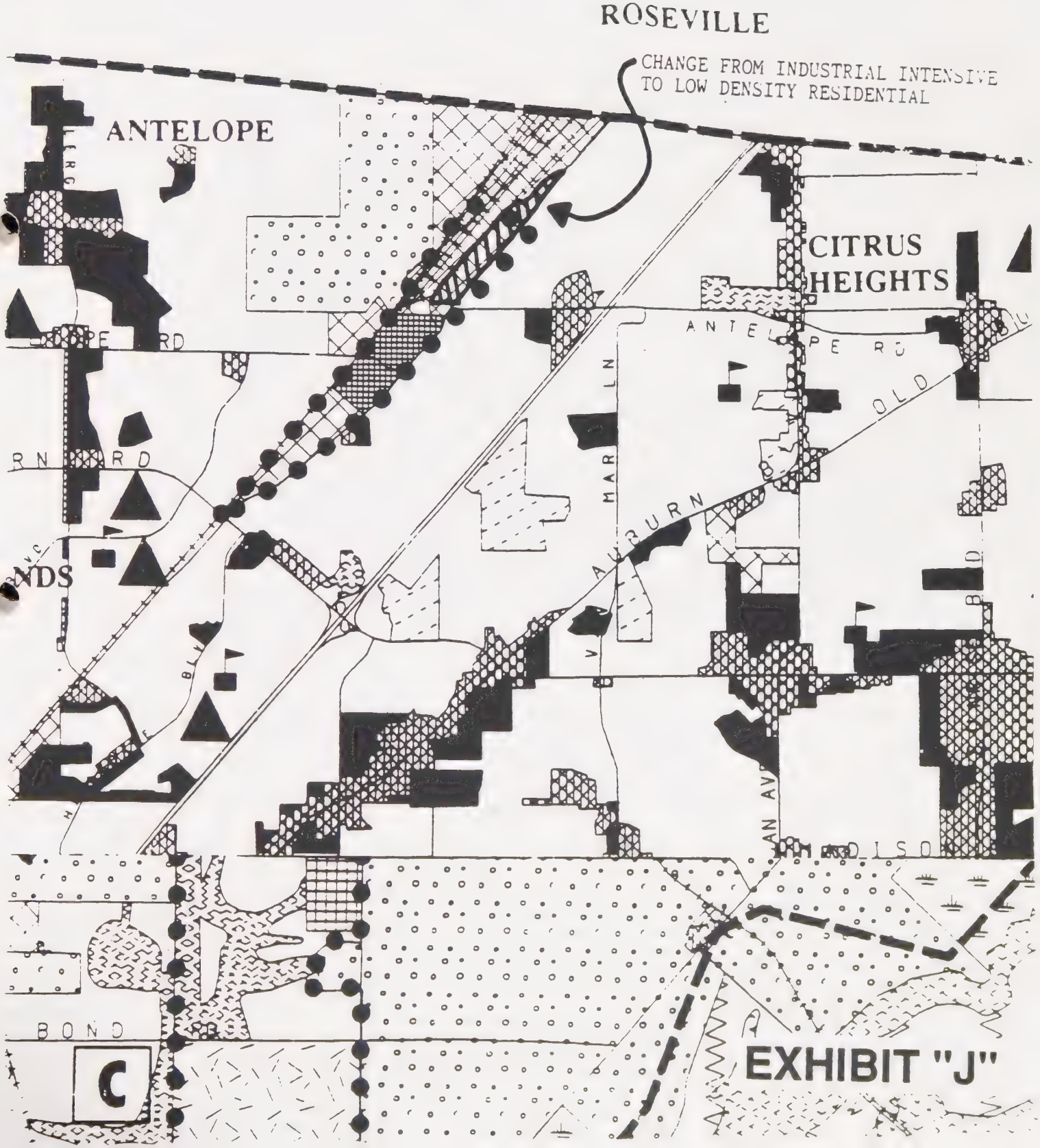

change from RECREATIONAL to
LOW DENSITY RESIDENTIAL
C
C
C
C
ELK
GROVE

EXHIBIT "H"


C
C
C
C
NEW ELK GROVE HIGH SCHOOL
ELK GROVE
EXHIBIT "I"


ROSEVILLE
CHANGE FROM INDUSTRIAL INTENSIVE TO LOW DENSITY RESIDENTIAL
ANTELOPE
CITRUS HEIGHTS
ANTELOPE RD
MARLN
AUBURN
OLD
BOND
C
EXHIBIT "J"

CO-96 Prior to adoption of the mitigation banking ordinance, utilize on a county-wide basis, the adopted interim wetland mitigation/compensation-policy: All wetland acreage proposed to be disturbed by any project over which the Board of Supervisors has discretionary approval shall be mitigated/compensated for by either one or a combination of the following methods:

1) Preserve or create wetlands sufficient to result in no net loss of wetland acreage, and protect their required watersheds as is necessary for the continued function of wetlands on the project site. The appropriate hearing body shall determine that project design, configuration, and wetland management plan, provide reasonable assurances that the wetlands will be protected and their long-term ecological health maintained.

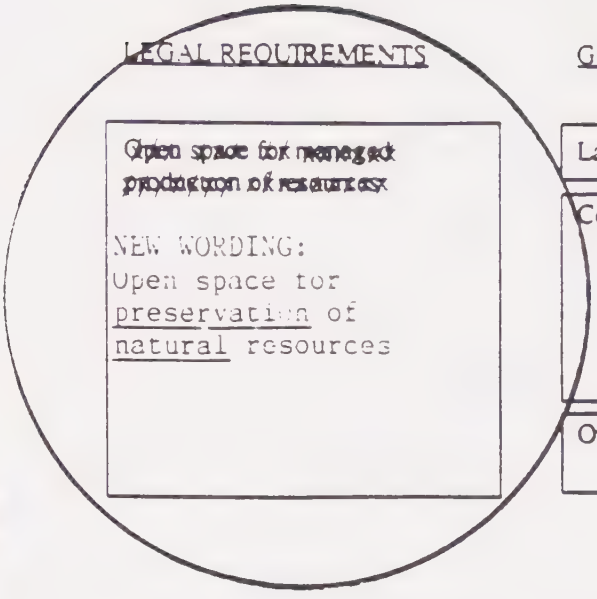
2) Where a Section 404 Permit has been issued by the Corps of Engineers, or an application has been made to obtain a Section 404 Permit, the Mitigation and Management Plan required by that permit or proposed to satisfy the requirements of the Corps for granting a permit may be submitted for purposes of satisfying paragraph 1, provided a no net loss of wetlands is achieved and, provided, further, that such mitigation and management plan shall be subject to the independent, discretionary approval of the Board of Supervisors.

3) **Pay to the County of Sacramento an amount based on a rate of $35,000 per acre for the unmitigated/uncompensated wetlands, which shall constitute mitigation for purposes of implementing adopted no net loss policies and CEQA required mitigation. The payment shall be collected by the Department of Planning and Community Development at the time of Improvement Plan or Building Permit approval, whichever occurs earlier, and deposited in the Wetlands Restoration Trust Fund.**

EXHIBIT 'K'

OPEN SPACE ELEMENT RELATIONSHIPS

Figure 1



LEGAL REQUIREMENTS	GENERAL PLAN ELEMENT	LAND USE DESIGNATIONS AND POLICIES
Open space for managed production of resources NEW WORDING: Open space for preservation of natural resources	Land Use Element	•Natural Preserve zones
	Conservation Element	•Marsh and riparian areas •Vernal pool protection •Urban stream policies •Rare and endangered species •Tree and woodland protection •Aquifer recharge areas
	Open Space Element	•Habitat acquisition •Urban stream corridors
Open space for managed production of resources	Land Use Element	•Agricultural use catagories •Aggregate resource category
	Conservation Element	•Soil productivity •Water quality •Mineral resources •Woodland management •Material conservation •Mitigation banks
	Agricultural Element	•General agriculture •Agricultural cropland •Williamson Act
	Open Space Element	•Acquisition
Open space for outdoor recreation	Land Use Element	•Recreation category
	Conservation Element	•Historic and cultural resources
Open space for pubic health and safety	Safety Element	•Flood hazard
	Conservation Element	•Urban stream corridors

EXHIBIT 'L'

SECTION IV

APPENDICES TO THE NOISE ELEMENT

APPENDIX

A. Acoustical Terminology

B. Technical Background
   1. Description of Noise
   2. Criteria for Acceptable Noise Standards
   3. Techniques for Noise Control

C. FHWA Model Input Data

D. Noise Measurement Data
   1. 1988 Noise Contour Data: Distance from Center of Roadway to Ldn Contours
   2. Summary of Measured Noise Levels and Estimated Day-Night Average Levels (Ldn) in Areas Containing Noise Sensitive Land Uses.
   3. Measured Ambient Noise Levels (Selected Locations)
   4. Community Noise Location Map
   5. Distance to 65 dB Ldn Contours: Arterial Traffic, Freeway Traffic at 55 and 65 MPH

E. Concentrations of Persons per Acre Standard

EXHIBIT "M"

APPENDIX A

ACOUSTICAL TERMINOLOGY

AMBIENT NOISE LEVEL: The composite of noise from all sources near and fa In this context, the ambient noise level constitut the normal or existing level of environmental noise a given location.

CNEL: Community Noise Equivalent Level. The averag equivalent sound level during a 24-hour day, obtain after addition of approximately five decibels to sou levels in the evening from 7:00 p.m. to 10:00 p.m. a ten decibels to sound levels in the night before 7: a.m. and after 10:00 p.m.

DECIBEL, dB: A unit for describing the amplitude of sound, equal 20 times the logarithm to the base 10 of the ratio the pressure of the sound measured to the referen pressure, which is 20 micropascals (20 micronewto per square meter).

L_{dn}: Day-Night Average Sound Level. The average equivale sound level during a 24-hour day, obtained aft addition of ten decibels to sound levels in the nig after 10:00 p.m. and before 7:00 a.m.

L_{eq}: Equivalent Sound Level. The sound level containi the same total energy as a time varying signal over given sample period. L_{eq} is typically computed ov 1, 8 and 24-hour sample periods.

NOTE: CNEL and L_{dn} represent daily levels of noise exposure averaged an annual basis, while L_{eq} represents the average noise exposu for a shorter time period, typically one hour.

L_{max}: The maximum sound level recorded during a noise even

L_n: The sound level exceeded "n" percent of the ti during a sample interval. L_{10} equals the lev exceeded 10 percent of the time (L_{90}, L_{50}, etc.)

ACOUSTICAL TERMINOLOGY

NOISE EXPOSURE CONTOURS: Lines drawn about a noise source indicating constant levels of noise exposure. CNEL and L_{dn} contours are frequently utilized to describe community exposure to noise.

SEL or SENEL: Sound Exposure Level or Single Event Noise Exposure Level. The level of noise accumulated during a single noise event, such as an aircraft overflight, with reference to a duration of one second. More specifically, it is the time-integrated A-weighted squared sound level for a stated time interval or event, based on a reference pressure of 20 micropascals and a reference duration of one second.

SOUND LEVEL: The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.

APPENDIX B

TECHNICAL BACKGROUND DOCUMENT
SACRAMENTO COUNTY NOISE ELEMENT

I. DESCRIPTION OF NOISE

Noise is often defined simply as unwanted sound, and thus is a subjective reaction to characteristics of a physical phenomenon. Researchers for many years have grappled with the problem of translating objective measurements of sound into directly correlatable measures of public reaction to noise. The descriptors of community noise in current use are the results of these efforts, and represent simplified, practical measurement tools to gauge community response. Before elaborating on these descriptors, it is useful to first discuss some fundamental concepts of sound.

Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and hence are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, now called Hertz (Hz) by international agreement.

The speed of sound in air is approximately 770 miles per hour, or 1,130 feet/second. Knowing the speed and frequency of a sound, one may calculate its wavelength, the physical distance in air from one compression of the atmosphere to the next. An understanding of wavelength is useful in evaluating the effectiveness of physical noise control devices such as mufflers or barriers, which depend upon either absorbing or blocking sound waves to reduce sound levels.

Measureing sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold of 20 micropascals as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range.

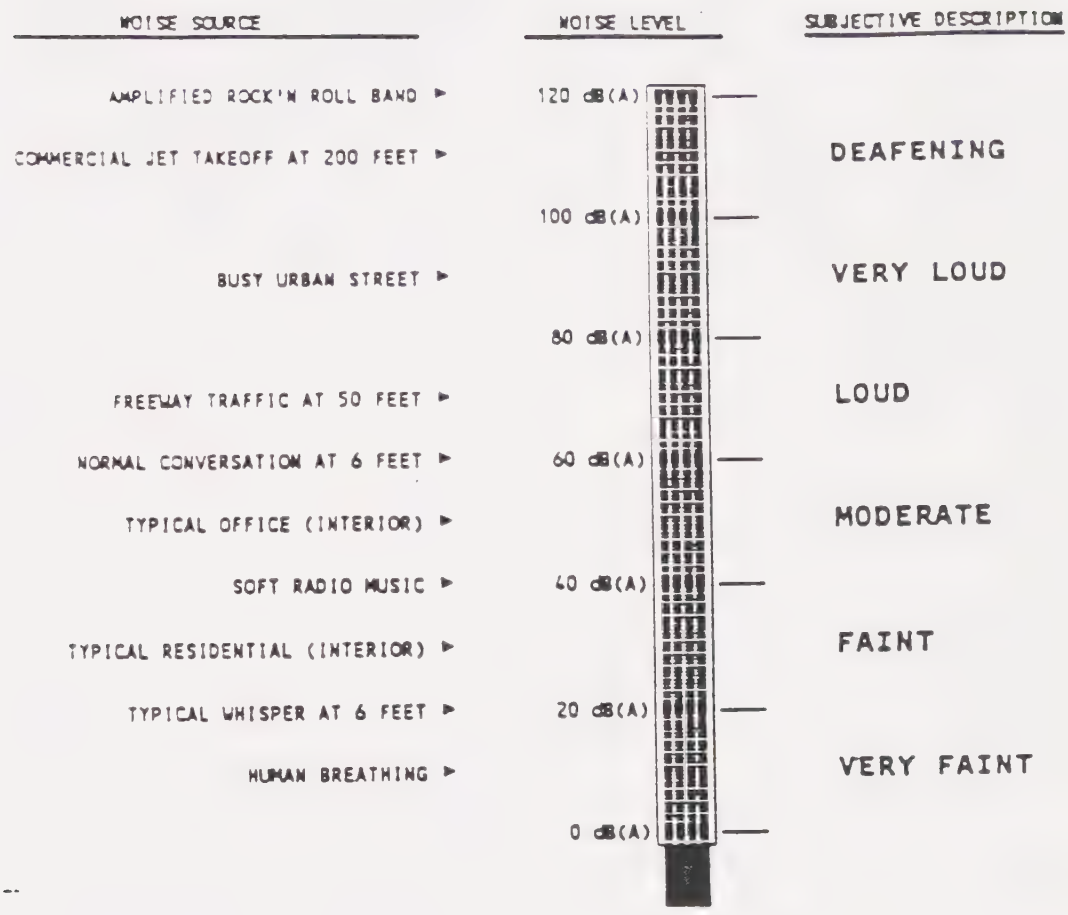
The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighting the frequency response of a sound level measurement device (called a sound level meter) by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. Figure B-1 illustrates typical A-weighted noise levels and subjective reaction due to recognizable sources.

Community noise is commonly described in terms of the "ambient" noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A-weighted sound level containing the same total energy as a time-varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptors such as L_{dn} and CNEL, and shows very good correlation with community response to noise.

Two composite noise descriptors are in common use today: L_{dn} (Day-night Average Level) and CNEL (Community Noise Equivalent Level). The L_{dn} is based upon the average hourly L_{eq} over a 24-hour day, with a +10 decibel weighting applied to nighttime (10:00 p.m. to 7:00 a.m.) L_{eq} values. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. The CNEL, like L_{dn}, is based upon the weighted average hourly L_{eq} over a 24-hour day, except that an additional +4.77 decibel penalty is applied to evening (7:00 p.m. to 10:00 p.m.) hourly L_{eq} values. The CNEL was developed for the California Airport Noise Regulations, and is applied specifically to airport/aircraft noise assessment. The L_{dn} descriptor is a simplification of the CNEL concept, but the two will usually agree, for a given situation, within 1 dB. Like the L_{eq}, L_{dn} and CNEL are averages and tend to disguise short-term variations in the noise environment. Because they presume increased evening or nighttime sensitivity, they are best applied as criteria

FIGURE B-1
EXAMPLES OF NOISE LEVELS



for land uses where nighttime noise exposures are critical to the acceptability of the noise environment, such as residential developments.

Noise in the community has often been cited as being a health problem, not in terms of actual physiological damage such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities such as sleep, speech, recreation, and tasks demanding concentration or coordination. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases, and the acceptability of the environment for people decreases. This decrease in acceptability and the threat to public well-being are the bases for land use planning policies preventing exposure to excessive community noise levels.

To control noise from fixed sources which have developed from processes other than zoning or land use planning, many jurisdictions have adopted community noise control ordinances. Such ordinances are intended to abate noise nuisances and to control noise from existing sources. They may also be used as performance standards to judge the creation of a potential nuisance, or potential encroachment of sensitive uses upon noise-producing facilities. Community noise control ordinances are generally designed to resolve noise problems on a short-term basis (usually by means of hourly noise level criteria), rather than on the basis of 24-hour or annual cumulative noise exposures.

In addition to the A-weighted noise level, other factors should be considered in establishing criteria for noise sensitive land uses. For example, sounds with noticeable tonal content such as whistles, horns, droning or high-pitched sounds may be more annoying than the A-weighted sound level alone suggests. Many noise standards apply a penalty, or correction, of 5 dBA to such sounds. The effects of unusual tonal content are generally more of a concern at nighttime, when residents may notice the sound in contrast to low levels of background noise.

Because many rural residential areas experience very low noise levels, residents may express concern about the loss of "peace and quiet" due to the introduction of a sound which was not audible previously. In very quiet environments, the introduction of virtually any change in local activities

will cause an increase in noise levels. A change in noise level and the loss of "peace and quiet" is the inevitable result of land use or activity changes in such areas. Audibility of a new noise source and/or increases in noise levels within recognized acceptable limits are not usually considered to be significant noise impacts, but these concerns should be addressed and considered in the planning and environmental review processes.

2. CRITERIA FOR ACCEPTABLE NOISE EXPOSURES

The State Office of Planning and Research (OPR) Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The OPR guidelines contain a land use compatibility table which describes the compatibility of different land uses with a range of environmental noise levels in terms of L_{dn} or CNEL. A noise environment of 50 to 60 dB L_{dn} or CNEL is considered to be "normally acceptable" for residential uses according to those guidelines. The OPR recommendations also note that, under certain conditions, more restrictive standards than the maximum levels cited may be appropriate. As an example, the standards for quiet suburban and rural communities may be reduced by 5 to 10 dB to reflect lower existing outdoor noise levels.

The U.S. Environmental Protection Agency (EPA) also offers guidelines for community noise exposure in the publication "Information on the Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety". These guidelines consider occupational noise exposure as well as noise exposure in the home. The "Levels Document" recognizes an exterior noise level of 55 dB L_{dn} as a goal to protect the public from hearing loss, activity interference, sleep disturbance and annoyance. The EPA notes, however, that this level is not a regulatory goal, but is a level defined by a negotiated scientific concensus without concern for economic and technological feasibility or the needs and desires of any particular community. The EPA and other Federal agencies have adopted suggested land use compatibility guidelines which indicate that residential noise exposures of 55 to 65 dB L_{dn} are acceptable.

The U.S. Environmental Protection Agency has also prepared a Model Community Noise Control Ordinance, using L_{eq} as the means of defining allowable residential noise level limits. The EPA model contains no specific recommendations for local noise level standards, but reports a range of L_{eq}

values as adopted by various local jurisdictions. The mean daytime residential noise standard reported by the EPA is 56.75 dBA (L_{eq}); the mean nighttime residential noise standard is 51.76 dBA (L_{eq}). This ordinance format has been applied by the City and County of San Diego.

3. TECHNIQUES FOR NOISE CONTROL

Any noise problem may be considered as being composed of three basic elements: the noise source, a transmission path, and a receiver. Local control of noise sources is practical only with respect to fixed sources (e.g., industrial facilities, outdoor activities, etc.), as control of vehicular sources is generally preempted by federal or state law. Control of fixed noise sources is usually best obtained by enforcement of a local noise control ordinance. The emphasis of noise control in land use planning is therefore placed upon acoustical treatment of the transmission path and the receiving structures.

The appropriate acoustical treatment for a given project should consider the nature of the noise source and the sensitivity of the receiver. The problem should be defined in terms of appropriate criteria (L_{dn}, L_{eq}, or L_{max}), the location of the sensitive receiver (inside or outside), and when the problem occurs (daytime or nighttime). Noise control techniques should then be selected to provide an acceptable noise environment for the receiving property while remaining consistent with local aesthetic standards and practical structural and economic limits. Fundamental noise control techniques include the following:

a. Use of Setbacks

Noise exposure may be reduced by increasing the distance between the noise source and receiving use. Setback areas can take the form of open space, frontage roads, recreational areas, storage yards, etc. The available noise attenuation from this technique is limited by the characteristics of the noise source, but is generally 4 to 6 dBA per doubling of distance from the source.

b. Use of Barriers

Shielding by barriers can be obtained by placing walls, berms or other structures, such as buildings, between the noise source and the receiver. The effectiveness of a barrier depends upon blocking line-of-sight between the source and receiver, and is improved with increasing the distance the sound

must travel to pass over the barrier as compared to a straight line from source to receiver. The difference between the distance over a barrier and a straight line between source and receiver is called the "pathlength difference," and is the basis for calculating barrier noise reduction.

Barrier effectiveness depends upon the relative heights of the source, barrier and receiver. In general, barriers are most effective when placed close to either the receiver or the source. An intermediate barrier location yields a smaller pathlength difference for a given increase in barrier height than does a location closer to either source or receiver.

For maximum effectiveness, barriers must be continuous and relatively airtight along their length and height. To ensure that sound transmission through the barrier is insignificant, barrier mass should be about 4 lbs./square foot, although a lesser mass may be acceptable if the barrier material provides sufficient transmission loss in the frequency range of concern. Satisfaction of the above criteria requires substantial and well-fitted barrier materials, placed to intercept line-of-sight to all significant noise sources. Earth, in the form of berms or the face of a depressed area, is also an effective barrier material.

Transparent noise barriers may be employed, and have the advantage of being aesthetically pleasing in some environments. Transparent barrier materials such as laminated glass and polycarbonate provide adequate transmission loss for most highway noise control applications. Transparent barrier materials may be flammable, and may be easily abraded. Some materials may lose transparency upon extended exposure to sunlight. Maintaining aesthetic values requires that transparent barriers be washed on a regular basis. These properties of transparent barrier materials require that the feasibility of their use be considered on a case-by-case basis.

The attenuation provided by a barrier depends upon the frequency content of the source. Generally, higher frequencies are attenuated (reduced) more readily than lower frequencies. This results because a given barrier height is relatively large compared to the shorter wavelengths of high frequency sounds, while relatively small compared to the longer wavelengths of the frequency sounds. The effective center frequency for traffic noise is usually considered to be 550 Hz. Railroad engines, cars and horns emit noise with differing frequency content, so the effectiveness of a barrier will vary for each of these sources. Frequency analyses are necessary to properly calculate

barrier effectiveness for noise from sources other than highway traffic.

There are practical limits to the noise reduction provided by barriers. For highway traffic noise, a 5 to 10 dBA noise reduction may often be reasonably attained. A 15 dBA noise reduction is sometimes possible, but a 20 dBA noise reduction is extremely difficult to achieve. Barriers usually are provided in the form of walls, berms, or berm/wall combinations. The use of an earth berm in lieu of a solid wall will provide up to 3 dBA additional attenuation over that attained by a solid wall alone, due to the absorption provided by the earth. Berm/wall combinations offer slightly better acoustical performance than solid walls, and are often preferred for aesthetic reasons.

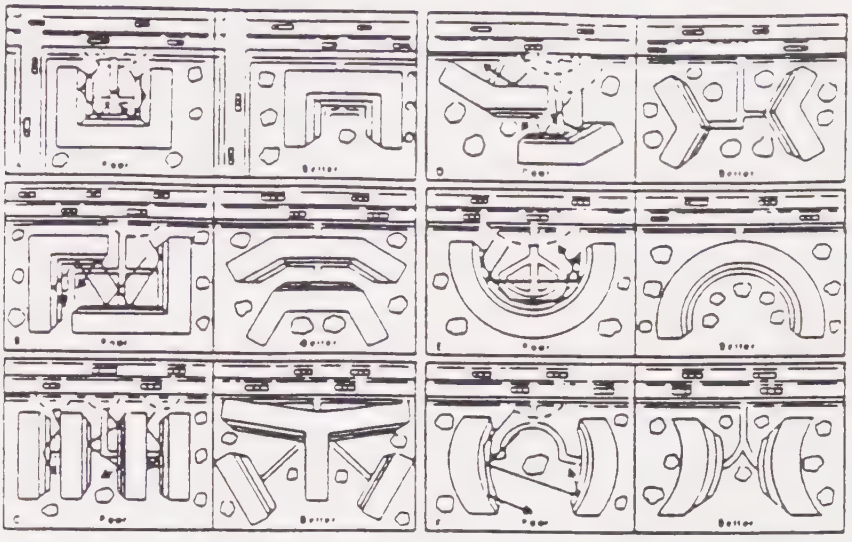
Another form of barrier is the use of a depressed noise source location, such as depressed loading areas in shopping centers or depressed roadways. The walls of the depression serve to break line-of-sight between the source and receiver, and will provide absorption if left in earth or vegetative cover.

c. Site Design

Buildings can be placed on a project site to shield other structures or areas, to remove them from noise-impacted areas, and to prevent an increase in noise level caused by reflections. The use of one building to shield another can significantly reduce overall project noise control costs, particularly if the shielding structure is insensitive to noise. As an example, carports or garages can be used to form or complement a barrier shielding adjacent dwellings or an outdoor activity area. Similarly, one residential unit can be placed to shield another so that noise reduction measures are needed for only the building closest to the noise source. Placement of outdoor activity areas within the shielded portion of a building complex, such as a central courtyard, can be an effective method of providing a quiet retreat in an otherwise noisy environment. Patios or balconies should be placed on the side of a building opposite the noise source, and "wing walls" can be added to buildings or patios to help shield sensitive uses.

Where project design does not allow using buildings or other land uses to shield sensitive uses, noise control costs can be reduced by orienting buildings with the narrow end facing the noise source, reducing the total area of the building requiring acoustical treatment. Some examples of building orientation to reduce noise impacts are shown in Figure B-2.

FIGURE B-2



Another option in site design is the placement of relatively insensitive land uses, such as commercial or storage areas, between the noise source and a more sensitive portion of the project. Examples include development of a commercial strip along a busy arterial to block noise affecting a residential area, or providing recreational vehicle storage or travel trailer parking along the noise-impacted edge of a mobile home park. If existing topography or development adjacent to the project site provides some shielding, as in the case of an existing berm, knoll or building, sensitive structures or activity areas may be placed behind those features to reduce noise control costs. (See Figure B-3)

FIGURE B-3

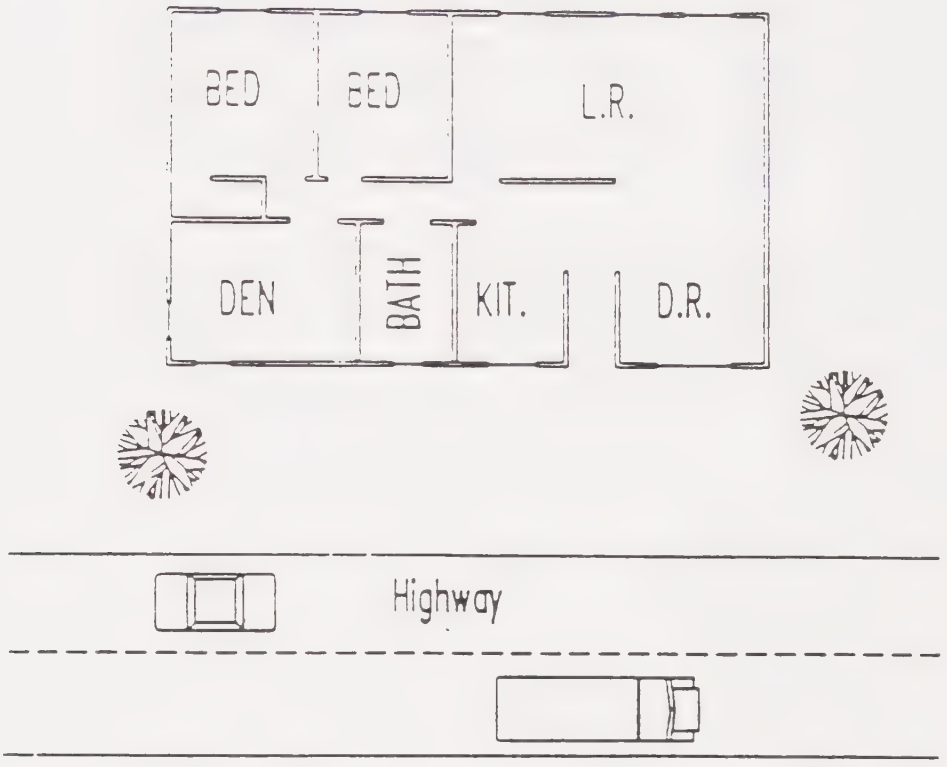
Site design should also guard against the creation of reflecting surfaces which may increase onsite noise levels. For example, two buildings placed at an angle facing a noise source may cause noise levels within that angle to increase by up to 3 dBA. The open end of "U"-shaped buildings should point away from noise sources for the same reason. Landscaping walls or noise barriers located within a development may inadvertently reflect noise back to a noise-sensitive area unless carefully located. Avoidance of these problems while attaining an aesthetic site design requires close coordination between local agencies, the project engineer and architect, and the noise consultant.

Another important aspect of site design is avoiding the creation of noise problems at adjacent noise-sensitive properties. For example, air conditioning units should not be placed adjacent to living areas of adjoining residences unless adequate shielding is provided. Swimming pools and outdoor activity areas such as "tot lots" should be located away from adjoining residences, or should be adequately shielded.

d. Building Design

When structures have been located to provide maximum noise reduction by barriers or site design, noise reduction measures may still be required to achieve an acceptable interior noise environment. The cost of such measures may be reduced by placement of interior dwelling unit features. For example, bedrooms, living rooms, family rooms and other noise-sensitive portions of a dwelling can be located on the side of the unit farthest from the noise source, as shown by Figure B-4.

FIGURE B-4



Bathrooms, closets, stairwells and food preparation areas are relatively insensitive to exterior noise sources, and can be placed on the noisy side of a unit. When such techniques are employed, noise reduction requirements for the building facade can be significantly reduced, although the architect must take care to isolate the noise impacted areas by the use of partitions or doors.

In some cases, external building facades can influence reflected noise levels affecting adjacent buildings. This is primarily a problem where high-rise buildings are proposed, and the effect is most evident in urban areas, where an "urban canyon" may be created. Bell-shaped or irregular building facades and attention to the orientation of the building can reduce this effect.

e. Noise Reduction by Building Facades

When interior noise levels are of concern in a noisy environment, noise reduction may be obtained through acoustical design of building facades. Standard residential construction practices provide 12-15 dBA noise reduction for building facades with open windows, and 20-25 dBA noise reduction when windows are closed. Thus a 20 dBA exterior-to-interior noise reduction can be obtained by the requirement that building design include adequate ventilation systems, allowing windows on a noise-impacted facade to remain closed under any weather condition.

Where greater noise reduction is required, acoustical treatment of the building facade is necessary. Reduction of relative window area is the most effective control technique, followed by providing acoustical glazing (thicker glass or increased air space between panes) in low air infiltration rate frames, use of fixed (non-movable) acoustical glazing or the elimination of windows. Noise transmitted through walls can be reduced by increasing wall mass (using stucco or brick in lieu of wood siding), isolating wall members by the use of double- or staggered- stud walls, or mounting interior walls on resilient channels. Noise control for exterior doorways is provided by reducing door area, using solid-core doors, and by acoustically sealing door perimeters with suitable gaskets. Roof treatments may include the use of plywood sheathing under roofing materials.

Standard energy-conservation double-pane glazing with an 1/8" or 1/4" air-space is not considered acoustical glazing, as its sound transmission loss for some noise sources is actually less than that of single-pane glazing.

Whichever noise control techniques are employed, it is essential that attention be given to installation of weatherstripping and caulking of joints. Openings for attic or subfloor ventilation may also require acoustical treatment; tight-fitting fireplace dampers and glass doors may be needed in aircraft noise-impacted areas.

Design of acoustical treatment for building facades should be based upon analysis of the level and frequency content of the noise source. The transmission loss of each building component should be defined, and the composite noise reduction for the complete facade calculated, accounting for absorption in the receiving room. A one-third octave band analysis is a definitive method of calculating the A-weighted noise reduction of a facade.

A common measure of transmission loss is the Sound Transmission Class (STC). STC ratings are not directly comparable to A-weighted noise reduction, and must be corrected for the spectral content of the noise source. Requirements for transmission loss analyses are outlined by Title 24 of the California Code of Regulations.

f. Use of Vegetation

Trees and other vegetation are often thought to provide significant noise attenuation. However, approximately 100 feet of dense foliage (so that no visual path extends through the foliage) is required to achieve a 5 dBA attenuation of traffic noise. Thus the use of vegetation as a noise barrier should not be considered a practical method of noise control unless large tracts of dense foliage are part of the existing landscape.

Vegetation can be used to acoustically "soften" intervening ground between a noise source and receiver, increasing ground absorption of sound and thus increasing the attenuation of sound with distance. Planting of trees and shrubs is also of aesthetic and psychological value, and may reduce adverse public reaction to a noise source by removing the source from view, even though noise levels will be largely unaffected. It should be noted, however, that trees planted on the top of a noise control berm can actually slightly degrade the acoustical performance of the barrier. This effect can occur when high frequency sounds are diffracted (bent) by foliage and directed downward over a barrier.

In summary, the effects of vegetation upon noise transmission are minor, and are primarily limited to increased absorption of high frequency sounds and to reducing adverse public reaction to the noise by providing aesthetic benefits.

g. Sound Absorbing Materials

Absorptive materials such as fiberglass, foam, cloth and acoustical tiles or panels are used to reduce reflections or reverberation in closed spaces. Their use in exterior environmental noise control may reduce reflections between parallel noise barriers or other reflective surfaces. Maintenance of absorptive materials used outdoors may be difficult, as most such materials are easily damaged by sunlight and moisture. Their application as an outdoor noise control tool is limited to special cases where the control of reflected noise is critical and where the material is sufficiently durable.

A Model RD-77-108: Brown-Buntin Associates, Inc.
Veno Emission Curves Run Date: 11-28-1989
oject Number: 89-242 Run Time: 08:39:18
Year: Existing (1988) Sacramento County Volumes
Soft Site

INPUT DATA SUMMARY:

Segment	ADT	Day%	Eve%	Nite%	%MT	%HT	Speed	Distanc
1	42000.0	75.0	0.0	25.0	3.6	15.9	55.0	150.
2	32000.0	75.0	0.0	25.0	2.7	15.3	65.0	150.
3	31000.0	75.0	0.0	25.0	2.7	15.3	65.0	150.
4	28000.0	75.0	0.0	25.0	3.2	18.3	65.0	150.
5	16400.0	75.0	0.0	25.0	3.2	9.2	55.0	150.
6	20500.0	75.0	0.0	25.0	3.2	9.2	55.0	150.
7	123000.0	75.0	0.0	25.0	2.8	7.2	55.0	150.
8	106000.0	75.0	0.0	25.0	3.2	8.8	55.0	150.
9	72000.0	75.0	0.0	25.0	3.2	10.8	55.0	150.
10	40000.0	75.0	0.0	25.0	3.6	11.2	55.0	150.
11	52000.0	75.0	0.0	25.0	4.4	13.6	55.0	150.
12	44000.0	75.0	0.0	25.0	4.4	13.6	55.0	150.
13	37500.0	75.0	0.0	25.0	4.4	13.6	55.0	150.
14	33000.0	75.0	0.0	25.0	4.4	13.6	55.0	150.
.	134000.0	75.0	0.0	25.0	3.2	3.2	55.0	150.
.	127000.0	75.0	0.0	25.0	3.2	3.2	55.0	150.
.	116000.0	75.0	0.0	25.0	2.4	4.0	55.0	150.
18	98000.0	75.0	0.0	25.0	2.4	4.0	55.0	150.
19	72000.0	75.0	0.0	25.0	2.6	3.8	55.0	150.
20	53000.0	75.0	0.0	25.0	2.6	3.8	55.0	150.
21	42500.0	75.0	0.0	25.0	2.7	3.7	55.0	150.
22	81000.0	75.0	0.0	25.0	1.9	4.5	55.0	150.
23	171000.0	75.0	0.0	25.0	2.3	4.1	55.0	150.
24	147000.0	75.0	0.0	25.0	2.4	5.0	55.0	150.
25	114000.0	75.0	0.0	25.0	2.5	6.6	55.0	150.
26	100000.0	75.0	0.0	25.0	2.9	7.3	55.0	150.
27	10500.0	75.0	0.0	25.0	3.7	7.4	55.0	150.
28	8500.0	75.0	0.0	25.0	3.7	7.4	55.0	150.
29	6500.0	75.0	0.0	25.0	3.7	7.4	55.0	150.
30	10000.0	75.0	0.0	25.0	3.7	7.4	55.0	150
31	6500.0	75.0	0.0	25.0	3.7	7.4	55.0	150
32	35880.0	87.0	0.0	13.0	2.5	2.5	40.0	75
33	31300.0	87.0	0.0	13.0	2.5	2.5	40.0	75
34	28710.0	87.0	0.0	13.0	2.5	2.5	40.0	75
35	30040.0	87.0	0.0	13.0	2.5	2.5	45.0	75
36	25960.0	87.0	0.0	13.0	2.5	2.5	45.0	75
37	15510.0	87.0	0.0	13.0	2.5	2.5	45.0	75
38	20000.0	87.0	0.0	13.0	2.5	2.5	45.0	75
39	32820.0	87.0	0.0	13.0	2.5	2.5	35.0	75
.	36420.0	87.0	0.0	13.0	2.5	2.5	40.0	75
.	25650.0	87.0	0.0	13.0	2.5	2.5	40.0	75
.	15960.0	87.0	0.0	13.0	2.5	2.5	40.0	75
43	17760.0	87.0	0.0	13.0	2.5	2.5	40.0	75
44	19580.0	87.0	0.0	13.0	2.5	2.5	40.0	75
45	15570.0	87.0	0.0	13.0	2.5	2.5	35.0	75

STAMINA Model RD-77-108: Brown-Buntin Associates, Inc.
Caveno Emission Curves Run Date: 11-28-1989
Project Number: 89-242 Run Time: 08:39:26
Year: Existing (1988) Sacramento County Volumes
Soft Site

INPUT DATA SUMMARY:

Segment	ADT	Day%	Eve%	Nite%	%MT	%HT	Speed	Distance
46	19250.0	87.0	0.0	13.0	2.5	2.5	35.0	75.0
47	19960.0	87.0	0.0	13.0	2.5	2.5	35.0	75.0
48	22840.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
49	20240.0	87.0	0.0	13.0	2.5	2.5	35.0	75.0
50	23140.0	87.0	0.0	13.0	2.5	2.5	35.0	75.0
51	15520.0	87.0	0.0	13.0	2.5	2.5	30.0	75.0
52	18320.0	87.0	0.0	13.0	2.5	2.5	45.0	75.0
53	19220.0	87.0	0.0	13.0	2.5	2.5	45.0	75.0
54	27210.0	87.0	0.0	13.0	2.5	2.5	45.0	75.0
55	37260.0	87.0	0.0	13.0	2.5	2.5	45.0	75.0
56	31580.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
57	41400.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
58	34490.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
59	26020.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
	31530.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
	41080.0	87.0	0.0	13.0	2.5	2.5	35.0	75.0
	50650.0	87.0	0.0	13.0	2.5	2.5	35.0	75.0
63	35390.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
64	27230.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
65	52220.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
66	20080.0	87.0	0.0	13.0	2.5	2.5	45.0	75.0
67	17300.0	87.0	0.0	13.0	2.5	2.5	45.0	75.0
68	38700.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
69	52300.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
70	30590.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
71	26370.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
72	30120.0	87.0	0.0	13.0	2.5	2.5	45.0	75.0
73	22710.0	87.0	0.0	13.0	2.5	2.5	45.0	75.0
74	17430.0	87.0	0.0	13.0	2.5	2.5	45.0	75.0
75	16970.0	87.0	0.0	13.0	2.5	2.5	35.0	75.0
76	24930.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
77	17910.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
78	22720.0	87.0	0.0	13.0	2.5	2.5	35.0	75.0
79	29500.0	87.0	0.0	13.0	2.5	2.5	35.0	75.0
80	43570.0	87.0	0.0	13.0	2.5	2.5	45.0	75.0
81	36590.0	87.0	0.0	13.0	2.5	2.5	45.0	75.0
82	23970.0	87.0	0.0	13.0	2.5	2.5	45.0	75.0
83	18850.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
84	13100.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
	21550.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
	25550.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
	35930.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
88	40390.0	87.0	0.0	13.0	2.5	2.5	45.0	75.0
89	25670.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0
90	33980.0	87.0	0.0	13.0	2.5	2.5	40.0	75.0

A Model RD-77-108: Brown-Buntin Associates, Inc.
Caveno Emission Curves Run Date: 11-28-1989
Project Number: 89-242 Run Time: 08:39:44
Year: Existing (1988) Sacramento County Volumes
Soft Site

INPUT DATA SUMMARY:

Segment	ADT	Day%	Eve%	Nite%	%MT	%HT	Speed	Distanc
91	47850.0	87.0	0.0	13.0	2.5	2.5	40.0	75.
92	27630.0	87.0	0.0	13.0	2.5	2.5	45.0	75.
93	52600.0	87.0	0.0	13.0	2.5	2.5	45.0	75.
94	37980.0	87.0	0.0	13.0	2.5	2.5	50.0	75.
95	33850.0	87.0	0.0	13.0	2.5	2.5	50.0	75.
96	26530.0	87.0	0.0	13.0	2.5	2.5	50.0	75.
97	29880.0	87.0	0.0	13.0	2.5	2.5	50.0	75.
98	18510.0	87.0	0.0	13.0	2.5	2.5	50.0	75.
99	32480.0	87.0	0.0	13.0	2.5	2.5	40.0	75.
100	28670.0	87.0	0.0	13.0	2.5	2.5	35.0	75.
101	24530.0	87.0	0.0	13.0	2.5	2.5	45.0	75.
102	20910.0	87.0	0.0	13.0	2.5	2.5	45.0	75.
103	22470.0	87.0	0.0	13.0	2.5	2.5	35.0	75.
104	13450.0	87.0	0.0	13.0	2.5	2.5	45.0	75.
	19640.0	87.0	0.0	13.0	2.5	2.5	45.0	75.
	24460.0	87.0	0.0	13.0	2.5	2.5	40.0	75.
	23860.0	87.0	0.0	13.0	2.5	2.5	45.0	75.
108	43580.0	87.0	0.0	13.0	2.5	2.5	45.0	75.
109	50120.0	87.0	0.0	13.0	2.5	2.5	45.0	75.
110	69600.0	87.0	0.0	13.0	2.5	2.5	45.0	75.
111	61960.0	87.0	0.0	13.0	2.5	2.5	45.0	75.
112	45630.0	87.0	0.0	13.0	2.5	2.5	45.0	75.
113	31960.0	87.0	0.0	13.0	2.5	2.5	45.0	75.(
114	18550.0	87.0	0.0	13.0	2.5	2.5	45.0	75.(
115	17640.0	87.0	0.0	13.0	2.5	2.5	45.0	75.(
116	21040.0	87.0	0.0	13.0	2.5	2.5	40.0	75.(
117	15850.0	87.0	0.0	13.0	2.5	2.5	40.0	75.(
118	19340.0	87.0	0.0	13.0	2.5	2.5	45.0	75.(
119	38590.0	87.0	0.0	13.0	2.5	2.5	35.0	75.(
120	45320.0	87.0	0.0	13.0	2.5	2.5	35.0	75.(
121	40410.0	87.0	0.0	13.0	2.5	2.5	35.0	75.(
122	22740.0	87.0	0.0	13.0	2.5	2.5	45.0	75.(
123	44740.0	87.0	0.0	13.0	2.5	2.5	40.0	75.(
124	58090.0	87.0	0.0	13.0	2.5	2.5	40.0	75.(
125	40160.0	87.0	0.0	13.0	2.5	2.5	40.0	75.(
126	55220.0	87.0	0.0	13.0	2.5	2.5	40.0	75.(
127	47290.0	87.0	0.0	13.0	2.5	2.5	40.0	75.(
128	86100.0	87.0	0.0	13.0	2.5	2.5	45.0	75.(
129	59970.0	87.0	0.0	13.0	2.5	2.5	45.0	75.(
	35320.0	87.0	0.0	13.0	2.5	2.5	45.0	75.(
	43500.0	75.0	0.0	25.0	2.8	5.7	55.0	150.(
	68000.0	75.0	0.0	25.0	2.9	7.7	55.0	150.(

TABLE D-1
1998 NOISE CONTOUR DATA
DISTANCE FROM CENTER OF ROADWAY
TO Ldn CONTOURS

Segment Nos.	Description	Distance (feet) To 60 dB	65 dB
Interstate 5:			
1	Yolo Co. Line to Hwy 99	1268	589
2	So. City Limits to Hood/Franklin	1230	571
3	Hood/Franklin to Twin Cities Rd.	1204	559
4	Twin Cities Rd. to San Joaquin Co. Line	1207	560
Highway 99:			
5	Sutter Co. Line to Elkhorn Blvd.	551	256
6	Elkhorn Blvd. to Interstate 5	640	297
7	Fruitridge to 47th Street	1949	905
8	47th Street to Florin Road	1886	875
9	Florin Road to Mack Road	1560	724
10	Mack Road to Stockton Blvd.	1073	498
11	Stockton Blvd. to Sheldon Road	1385	643
12	Sheldon Road to Bond Road	1239	575
13	Bond Road to Elk Grove Blvd.	1113	517
14	Elk Grove Blvd. to Galt City Limits	1023	475
Highway 50:			
15	Howe Avenue to Watt Avenue	1733	804
16	Watt Avenue to Mather Field Road	1672	776
17	Mather Field to Zinfandel	1616	750
18	Zinfandel to Sunrise Blvd.	1444	670
19	Sunrise Blvd. to Hazel Avenue	1168	542
20	Hazel Avenue to Folsom Blvd.	952	442
21	Folsom Blvd. to El Dorado County Line	819	380
Interstate 80:			
22	Watt Avenue to Route 51	1292	600
23	Route 51 to Madison Avenue	2100	975
24	Madison Avenue to Greenback Lane	1985	922
25	Greenback Lane to Antelope Road	1800	836
26	Antelope Road to Placer County Line	1707	792
131	County Line to I-5	916	425
132	I-5 to Northgate	1341	622
Highway 16:			
27	Watt Avenue to Bradshaw Road	386	179
28	Bradshaw Road to Excelsior Road	335	155
29	Excelsior Road to Sunrise Blvd.	280	130
30	Sunrise Blvd. to Murieta	373	173
31	Murieta to Ione	280	130

TABLE D-1 (cont'd)
1988 NOISE CONTOUR DATA
DISTANCE FROM CENTER OF ROADWAY
TO Ldn CONTOURS

Segment Nos.	Description	Distance (feet) To 60 dB	65 dB
47th Street:			
32	Martin Luther King to Hwy 99	328	152
33	Hwy 99 to 44th Street	300	139
34	44th Street to City Limits	283	131
Antelope Road:			
35	I-80 to Carriage Drive	344	160
36	Carriage Drive to Old Auburn Road	312	145
37	Old Auburn Road to Mariposa Avenue	221	103
38	Mariposa Avenue to Sunrise Blvd.	262	122
Arden Way:			
39	Ethan Way to Watt Avenue	259	120
Auburn Blvd.:			
40	Watt Avenue to Myrtle Avenue	331	154
41	Myrtle Avenue to Placer County Line	262	122
Coloma Road:			
42	Folsom Blvd. to Chase Drive	191	89
43	Chase Drive to McGregor Drive	205	95
44	McGregor Drive to Sunrise Blvd.	219	102
Dewey Drive:			
45	Greenback Lane to Coyle Avenue	157	73
46	Coyle Avenue to Madison Avenue	181	84
Eastern Avenue:			
47	Marconi Avenue to Arden Way	186	86
48	Arden Way to Fair Oaks Blvd.	243	113
Elk Grove Blvd.:			
49	Highway 99 to Emerald Oak	187	87
50	Emerald Oak to Elk Grove Florin Road	205	95
51	Elk Grove Florin Rd. to Waterman	145	67
Elkhorn Blvd.:			
52	20th Street to Watt Avenue	247	115
53	Watt Avenue to Walerga Road	256	119
54	Walerga Road to Don Julio Blvd.	322	150
55	Don Julio Blvd. to I-80	397	184

TABLE D-1 (cont'd)
1988 NOISE CONTOUR DATA
DISTANCE FROM CENTER OF ROADWAY
TO Ldn CONTOURS

Segment Nos.	Description	Distance (feet) To 60 dB	65 dB
Fair Oaks Blvd.:			
56	Howe Avenue to Watt Avenue	301	140
57	Watt Avenue to Eastern Avenue	361	168
58	Eastern Avenue to Walnut Avenue	320	148
59	Walnut Avenue to El Camino Avenue	265	123
60	El Camino Avenue to Marconi Avenue	301	140
61	Marconi Avenue to North Avenue	300	139
62	North Avenue to Manzanita Avenue	345	160
63	Manzanita Avenue to Marshall Avenue	325	151
64	Marshall Avenue to San Juan Avenue	273	127
65	San Juan Avenue to Sunrise Blvd.	421	196
66	Madison Avenue to Greenback Lane	263	122
67	Greenback Lane to Woodmore Oaks Dr.	238	111
Florin Road:			
68	Franklin Blvd. to Highway 99	345	160
69	Highway 99 to 65th Street	422	196
70	65th Street to Stockton Blvd.	295	137
71	Stockton Blvd. to Power Inn Road	267	124
Folsom Blvd.			
72	Watt Avenue to La Riviera Drive	345	160
73	La Riviera Drive to White Rock Road	286	133
74	White Rock Road to Sunrise Blvd.	239	111
Franklin Blvd.:			
75	Fruitridge Road to 47th Street	167	77
76	47th Street to Florin Road	257	120
77	Florin Road to East Parkway	207	96
Fulton Avenue:			
78	Auburn Blvd. to Marconi Avenue	202	94
79	Marconi Avenue to Fair Oaks Blvd.	241	112
Greenback Lane:			
80	I-80 to Sunrise Blvd.	441	205
81	Sunrise Blvd. to Kenneth Avenue	392	182
82	Kenneth Avenue to City of Folsom	296	137

TABLE D-1 (cont'd)
1988 NOISE CONTOUR DATA
DISTANCE FROM CENTER OF ROADWAY
TO Ldn CONTOURS

Segment Nos.	Description	Distance (feet) To 60 dB	65 dB
Hazel Avenue:			
83	Placer Co. Line to Oak Avenue	214	99
84	Oak Avenue to Central Avenue	168	78
85	Central Avenue to Greenback Lane	234	108
86	Greenback Lane to Sunset Avenue	262	121
87	Sunset Avenue to Winding Way	328	152
88	Winding Way to Highway 50	419	195
Howe Avenue:			
89	El Camino Avenue to Arden Way	263	122
90	Arden Way to Northrop Avenue	317	147
91	Northrop Avenue to Fair Oaks Blvd.	398	185
Madison Avenue:			
92	Airbase Drive to I-80	325	151
93	I-80 to Sunrise Blvd.	500	232
94	Sunrise Blvd. to Fair Oaks Blvd.	470	218
95	Fair Oaks Blvd. to Kenneth Avenue	435	202
96	Kenneth Avenue to Illinois Avenue	370	172
97	Illinois to Winding Oak Drive	400	186
98	Winding Oak Drive to City of Folsom	291	135
Manzanita:			
99	Fair Oaks Blvd. to Madison Avenue	307	143
Northrop Avenue:			
100	Bell Street to Fulton Avenue	236	110
San Juan Avenue:			
101	Greenback lane to Sunset Avenue	301	140
102	Sunset Avenue to Fair Oaks Blvd.	270	125
Stockton Blvd.:			
103	Fruitridge Road to 47th Street	201	93
104	47th Street to Florin Road	201	93
105	Florin Road to Gerber Road	259	120
106	Gerber Road to Highway 99	254	118

TABLE D-1 (cont'd)
1988 NOISE CONTOUR DATA
DISTANCE FROM CENTER OF ROADWAY
TO Ldn CONTOURS

Segment Nos.	Description	Distance (feet) To 60 dB	65 dB
Sunrise Blvd.:			
107	Placer County Line to Auburn Road	295	137
108	Auburn Road to Sunset Avenue	441	205
109	Sunset Avenue to Fair Oaks Blvd.	484	225
110	Fair Oaks Blvd. to Coloma Road	603	280
111	Coloma road to I-80	558	259
112	I-80 to Folsom Blvd.	455	211
113	Folsom Blvd. to Trade Center Drive	359	166
114	Trade Center Drive to Jackson Highway	250	116
Walnut Avenue:			
115	Winding Way to Edison Avenue	204	95
116	Edison Avenue to Marconi Avenue	230	107
117	Marconi Avenue to Fair Oaks Blvd.	190	88
Watt Avenue:			
118	Antelope Road to Elkhorn Blvd.	257	119
119	Elkhorn Blvd. to E Street	288	134
120	E Street to Airbase Drive	321	149
121	Airbase Drive to Roseville Road	297	138
122	Roseville Road to I-80	286	133
123	I-80 to Auburn Blvd.	380	176
124	Auburn Blvd. to Whitney Avenue	453	210
125	Whitney Avenue to Marconi Avenue	354	164
126	Marconi Avenue to Hurley Way	437	203
127	Hurley Way to Fair Oaks Blvd.	395	183
128	Fair Oaks Blvd. to Highway 50	694	322
129	Highway 50 to Folsom Blvd	546	253
130	Folsom Blvd. to Kiefer Road	383	178

TABLE D-2

SUMMARY OF MEASURED NOISE LEVELS AND ESTIMATED DAY-NIGHT AVERAGE LEVELS (Ldn) IN APEAS CONTAINING NOISE-SENSITIVE IAND USES

Site No.	Location	Date	Time	Level, dBA L90	L50	L10	Leq	Lmax	Est. Idn,dB
1	Bannister Park	7/27/89	09:00	42.3	43.5	49.0	47.3	63.5	48
			13:57	36.3	38.5	44.0	40.9	52.0	
			22:20	39.0	40.0	41.5	40.2	44.5	
2	Village Park	7/27/89	09:23	48.0	52.8	59.5	56.4	71.0	55
			14:23	47.3	49.8	56.3	53.2	67.5	
		7/28/89	00:41	38.8	40.8	45.5	43.6	57.3	
3	Fair Oaks Park	7/27/89	09:46	45.0	47.8	52.0	50.2	67.0	57
			14:50	43.8	47.0	53.3	51.4	67.8	
			20:46	47.8	49.5	52.0	50.1	60.0	
4	Tempo Park	7/27/89	10:11	44.5	46.3	48.5	47.1	60.0	57
			15:21	46.8	51.3	54.5	51.9	60.5	
			23:02	49.5	50.3	51.5	50.4	53.3	
5	Madera Park	7/27/89	10:35	37.5	41.0	47.8	44.7	58.0	53
			15:56	39.8	42.5	47.0	46.4	61.3	
			23:26	44.8	46.3	48.0	46.6	51.8	
6	Orangevale Park	7/27/89	11:09	37.0	41.0	50.0	48.7	64.0	49
			16:38	36.3	41.3	50.5	49.4	68.3	
			23:49	37.0	38.0	39.8	38.4	43.3	
7	Snipes Park	7/27/89	11:34	35.0	37.5	41.3	39.2	50.0	43
			17:12	37.0	39.0	42.5	40.3	50.3	
		7/28/89	00:06	34.0	35.5	37.3	36.1	45.0	
8	Phoenix Park	7/27/89	12:06	37.8	39.8	43.5	42.0	62.5	49
			17:38	42.3	44.8	51.0	47.3	59.0	
		7/28/89	00:25	39.8	41.5	43.0	41.6	46.3	
9	Mission Oak Park	7/28/89	15:10	44.0	46.5	49.0	47.5	59.5	53
		7/30/89	14:12	43.5	47.0	53.0	50.0	65.0	
		7/31/89	22:50	41.0	44.5	47.5	46.0	52.0	
10	Del Paso Manor Park	7/28/89	15:35	40.5	43.0	46.5	44.0	56.5	50
		7/30/89	14:33	39.5	43.0	49.5	47.5	60.5	
		7/31/89	23:02	40.0	42.5	44.5	43.0	52.5	

TABLE D-2 (cont.)

SUMMARY OF MEASURED NOISE LEVELS AND ESTIMATED
DAY-NIGHT AVERAGE LEVELS (Ldn) IN AREAS
CONTAINING NOISE-SENSITIVE LAND USES

Site No.	Location	Date	Time	Level, dBA L90	L50	L10	Leq	Lmax	Est. Ldn,dB
11	Sealy Park	7/28/89	14:40	43.5	46.0	50.0	47.0	57.5	54
		7/30/89	13:35	42.0	44.0	49.0	52.0	73.0	
		7/31/89	23:15	46.5	47.0	47.5	47.0	53.0	
12	Bellview Park	7/28/89	16:03	47.0	56.5	63.0	59.0	71.5	59
		7/30/89	13:05	42.5	47.5	53.0	55.5	75.0	
		7/31/89	23:28	43.5	49.0	51.0	52.0	61.0	
13	Crabtree Park	7/28/89	14:28	43.8	46.5	50.0	48.5	62.3	53
		7/28/89	16:50	44.5	46.8	51.0	51.1	68.0	
		7/31/89	23:31	43.8	45.0	46.8	45.4	49.5	
14	Ashton Park	7/28/89	12:41	41.8	44.3	49.5	46.6	60.0	56
			15:23	41.5	43.5	51.0	51.1	67.0	
		7/31/89	22:16	45.0	45.8	47.0	49.2	65.8	
15	Maddox Park	7/28/89	12:10	48.0	46.0	58.3	54.0	69.3	55
			14:55	41.0	44.3	53.8	50.8	66.8	
		7/31/89	22:35	41.8	42.5	44.5	46.7	63.3	
16	Swanston Park	7/28/89	13:16	47.0	52.3	57.0	53.7	63.3	58
			15:52	45.0	49.3	54.0	51.1	64.0	
		7/31/89	23:16	48.5	50.5	53.3	51.1	56.3	
17	Cottage Park	7/28/89	13:51	39.0	51.5	62.8	57.9	67.5	62
			16:21	39.8	41.5	49.8	47.7	67.0	
		7/31/89	22:52	49.8	51.0	59.3	55.6	66.3	
18	Brooktree Park	7/31/89	10:19	41.0	43.0	48.0	45.8	59.5	55
			13:49	38.3	41.0	48.3	46.9	65.0	
		8/01/89	22:08	44.0	45.0	50.0	49.3	63.5	
19	Del Campo Park	7/31/89	10:52	40.8	43.3	48.0	45.5	56.5	58
			14:15	38.0	40.5	47.0	44.1	59.0	
		8/01/89	22:22	42.0	43.0	58.0	52.1	62.2	
20	Ancil Hoffman Park	7/31/89	11:28	37.0	44.5	60.0	56.0	72.5	54
			14:46	35.0	38.8	44.0	41.3	53.5	
		8/01/89	22:41	42.0	43.0	43.0	43.2	45.4	

TABLE D-2 (cont.)

SUMMARY OF MEASURED NOISE LEVELS AND ESTIMATED DAY-NIGHT AVERAGE LEVELS (Ldn) IN AREAS CONTAINING NOISE-SENSITIVE LAND USES

Site No.	Location	Date	Time	Level, dBA L90	L50	L10	Leq	Lmax	Est. Ldn,dB
21	Arcade Park	7/31/89	12:10	49.0	50.5	54.0	53.8	75.0	60
			15:25	52.3	55.5	57.3	55.7	65.5	
		8/01/89	23:22	47.0	48.0	57.0	53.1	63.8	
22	West Wood Park	7/31/89	13:08	51.0	55.3	59.3	56.8	70.3	67
			15:58	53.5	56.8	59.5	57.2	63.8	
		8/01/89	23:45	56.0	59.0	63.0	60.6	68.5	
23	Corner of Roaring Camp & Boom Pointer	8/01/89	10:09	43.0	45.0	50.0	49.6	65.7	55
			13:31	39.0	42.0	50.0	48.0	62.0	
		8/02/89	00:20	45.0	47.0	50.0	47.9	52.0	
24	Mapola Park	8/01/89	10:46	45.0	47.0	50.0	52.2	69.5	53
			13:55	42.0	45.0	56.0	54.4	73.8	
		8/02/89	00:35	41.0	42.0	43.0	42.4	45.6	
25	Las Casas School	8/01/89	11:16	39.0	43.0	54.0	52.8	68.8	54
			14:22	42.0	43.0	52.0	54.4	77.1	
		8/02/89	00:50	44.0	45.0	45.0	45.1	49.4	
26	Manlove Park	8/01/89	12:54	44.0	51.0	54.0	53.4	68.8	53
			15:43	47.0	50.0	52.0	51.3	62.5	
		8/02/89	01:36	40.0	41.0	44.0	44.0	59.0	
27	American Park	8/01/89	12:29	40.0	44.0	53.0	51.2	69.3	60
			15:21	42.0	43.0	51.0	51.3	70.2	
		8/02/89	01:21	43.0	45.0	50.0	53.2	70.7	
28	Lincoln Village Park	8/01/89	11:43	40.0	42.0	49.0	46.6	59.4	58
			14:47	44.0	46.0	49.0	49.2	65.3	
		8/02/89	01:06	51.0	52.0	52.0	52.0	52.4	
29	Strizek Park	8/01/89	10:24	43.0	48.0	57.0	52.4	63.6	54
			14:03	43.0	47.0	56.0	52.8	68.0	
		8/02/89	22:34	41.0	43.0	45.0	44.6	56.9	

TABLE D-2 (cont.)

SUMMARY OF MEASURED NOISE LEVELS AND ESTIMATED DAY-NIGHT AVERAGE LEVELS (Ldn) IN AREAS CONTAINING NOISE-SENSITIVE LAND USES

Site No.	Location	Date	Time	Level, dBA L90	L50	L10	Leq	Lmax	Est. Ldn,dB
30	Brock Park	8/01/89	10:54	47.0	54.0	63.0	59.6	71.5	63
			14:29	51.0	56.0	61.0	58.5	72.6	
		8/02/89	22:56	52.0	55.0	58.0	55.9	61.7	
31	Gibson Ranch Park	8/01/89	11:19	37.0	39.0	48.0	47.8	66.6	53
			14:59	40.0	46.0	60.0	57.1	71.4	
		8/02/89	23:14	34.0	37.0	39.0	37.5	46.1	
32	Alpha Jr. High School	8/01/89	11:46	34.0	37.0	45.0	47.3	67.6	56
			15:31	34.0	37.0	51.0	49.2	67.0	
		8/02/89	23:33	42.0	45.0	52.0	49.4	53.1	
33	Westside Park	8/01/89	12:18	55.0	64.0	71.0	58.9	77.7	56
			15:56	39.0	42.0	50.0	49.4	65.9	
		8/02/89	23:53	40.0	44.0	49.0	46.6	57.7	
34	Rio Linda High School	8/01/89	12:44	46.0	51.0	57.0	54.0	64.6	65
			16:19	50.0	55.0	68.0	66.8	83.8	
		8/02/89	00:06	37.0	39.0	50.0	56.8	45.4	
35	Hood	9/14/89	08:53	42.5	45.5	51.0	48.5	61.5	56
		9/15/89	17:00	43.0	47.0	54.0	52.1	64.2	
		9/20/89	23:19	39.0	42.0	48.0	49.0	66.5	
36	Courtland	9/14/89	09:23	41.0	43.5	48.0	46.5	63.0	48
		9/15/89	16:24	42.0	45.0	52.3	49.5	63.0	
		9/20/89	23:03	33.5	34.5	39.0	36.5	49.0	
37	Locke	9/14/89	09:51	42.5	47.0	54.0	53.0	69.0	56
		9/15/89	15:59	43.3	48.0	52.8	49.6	59.0	
		9/20/89	22:46	33.0	36.5	49.5	49.0	64.0	
38	Ryde	9/14/89	10:18	41.0	43.5	53.0	49.5	66.0	51
		9/15/89	15:38	37.5	45.0	57.3	53.9	71.0	
		9/20/89	22:24	29.5	33.0	39.0	35.5	48.0	
39	Rancho Murieta Area	8/4/89	10:51	34.0	37.0	48.0	48.4	67.9	47
		8/3/89	15:57	35.0	37.0	45.0	41.8	57.8	
		8/9/89	22:35	35.0	36.5	38.5	37.0	43.0	

TABLE D-2 (cont.)

SUMMARY OF MEASURED NOISE LEVELS AND ESTIMATED DAY-NIGHT AVERAGE LEVELS (Ldn) IN AREAS CONTAINING NOISE-SENSITIVE LAND USES

Site No.	Location	Date	Time	Level, dBA L90	L50	L10	Leq	Lmax	Est. Ldn,dB
40	Mackey Road off Sheldon Road	8/04/89	09:17	39.0	43.0	53.0	52.0	70.2	52
		8/04/89	12:28	42.0	43.0	53.0	54.6	75.9	
		8/09/89	23:33	34.5	35.5	37.5	36.0	44.5	
41	6687 Garden Hwy	9/27/89	14:00	36.0	40.0	57.0	54.2	79.3	55
		9/28/89	01:00	39.0	41.0	44.0	44.3	68.8	
		9/28/89	09:00	40.0	44.0	57.0	55.0	74.1	
42	Jaeger Rd off Douglas	8/04/89	11:46	31.0	34.0	44.0	42.3	57.6	50
		8/03/89	14:47	30.0	36.0	56.0	53.8	73.3	
		8/09/89	22:01	35.5	37.0	40.0	38.0	43.0	
43	Freeman Road	8/04/89	09:59	35.0	38.0	42.0	41.3	56.2	55
			13:00	41.0	43.0	44.0	59.4	82.7	
		8/09/89	23:09	34.0	34.5	37.0	35.5	41.0	
44	Spiva Drive off Excelsior	8/03/89	17:12	30.0	37.0	50.0	49.6	68.2	47
		8/04/89	08:45	38.0	40.0	49.0	44.5	56.9	
		8/09/89	00:11	34.0	35.0	38.0	36.0	42.5	
45	Southwoods Park	8/08/89	09:59	42.5	46.5	59.0	55.0	73.0	53
			13:47	39.0	44.5	54.5	51.5	67.5	
		8/09/89	00:35	40.0	41.0	42.5	41.0	48.5	
46	Olde Florintown Park	8/08/89	10:33	48.5	51.5	58.0	54.5	65.5	55
			14:17	50.0	52.5	58.0	55.5	72.0	
		8/10/89	22:32	44.5	45.5	47.5	46.0	54.0	
47	Kennedy Park	8/08/89	10:58	46.0	47.5	55.5	53.5	70.5	54
			14:39	42.5	44.5	51.0	49.5	71.0	
		8/10/89	22:40	44.0	45.0	46.5	45.5	51.5	
48	Jack Davis Park	8/08/89	11:42	46.0	49.5	55.5	52.5	65.0	60
			15:12	49.0	54.0	60.0	57.0	71.0	
		8/10/89	23:18	51.5	53.5	55.0	53.5	55.5	
49	Rainbow Minipark	8/08/89	12:24	54.5	56.5	61.5	63.0	88.5	60
			15:37	54.5	56.5	59.5	57.5	68.5	
		8/10/89	23:28	44.5	44.5	45.5	44.5	45.5	

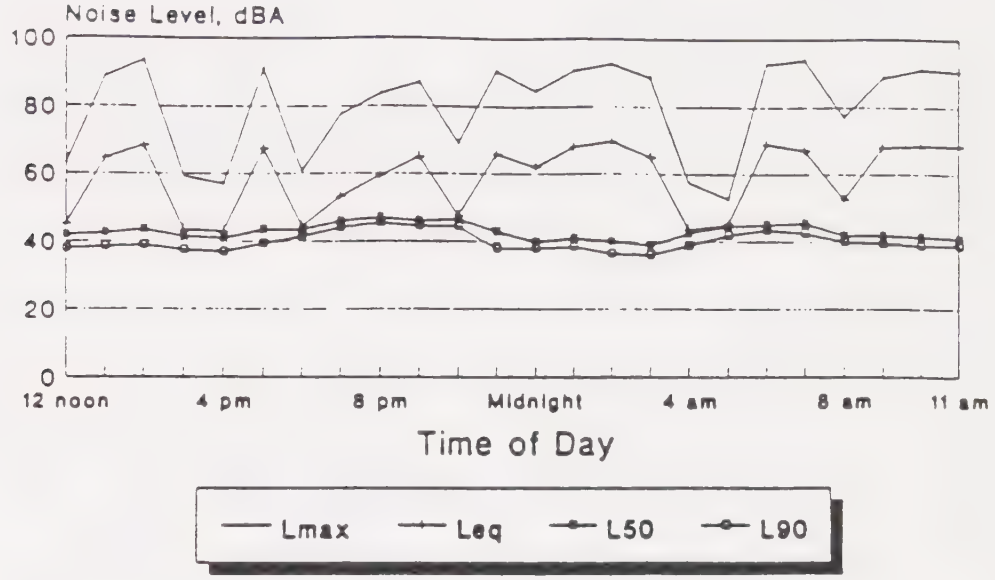
TABLE D-2 (cont.)

SUMMARY OF MEASURED NOISE LEVELS AND ESTIMATED DAY-NIGHT AVERAGE LEVELS (Ldn) IN AREAS CONTAINING NOISE-SENSITIVE LAND USES

Site No.	Location	Date	Time	Level, dBA L90	L50	L10	Leq	Lmax	Est. Ldn,dB
50	Royal Park	8/08/89	12:58	42.0	45.0	53.5	49.5	64.5	53
			16:04	43.0	46.0	56.0	54.5	69.5	
		8/09/89	01:08	41.5	43.5	45.5	43.5	48.0	
51	Riverside Park	9/14/89	10:49	48.0	52.5	58.5	56.0	70.5	59
		9/15/89	15:06	44.0	50.5	59.8	56.9	72.8	
		9/20/89	22:03	40.5	45.5	55.5	52.0	65.5	
52	New Hope Rd. & Orr Road	9/14/89	11:53	34.0	36.0	43.0	46.5	72.0	55
		9/15/89	14:18	43.5	44.5	50.0	56.3	78.5	
		9/26/89	21:57	42.8	43.5	45.0	46.2	59.0	
53	Clay Station Rd at Simmerhorn	9/14/89	12:30	28.5	32.0	46.5	53.5	76.0	54
		9/15/89	12:16	30.5	33.5	46.5	55.9	78.5	
		9/26/89	22:36	32.8	36.5	42.0	39.3	49.3	
54	Herald Community Park	9/14/89	13:01	34.5	41.0	53.0	49.0	63.0	50
		9/15/89	12:50	37.0	43.0	55.0	51.0	67.0	
		9/26/89	23:17	37.3	39.0	43.5	40.8	48.7	
55	Rancho Seco Area	9/14/89	13:29	34.0	38.0	44.8	42.0	54.2	46
		9/15/89	11:43	33.3	37.5	45.3	43.4	59.5	
		9/26/89	22:46	34.0	36.5	42.3	39.2	49.3	
56	Blake Rd East of Tavernor	9/14/89	13:55	29.5	33.5	43.5	40.0	54.5	48
		9/15/89	10:34	49.5	51.3	53.3	51.9	61.0	
		9/26/89	23:56	27.5	29.5	33.5	31.8	42.5	
57	Arno & Riley	9/14/89	14:28	26.5	29.0	39.5	43.5	66.5	46
		9/15/89	10:07	33.0	43.7	51.7	49.2	61.7	
		9/20/89	23:00	31.0	32.0	33.5	32.5	41.0	
58	Lambert Road off Carroll Street	9/14/89	15:10	30.5	35.0	45.0	46.5	69.5	50
		9/15/89	09:34	40.5	44.5	50.0	50.5	71.0	
		9/20/89	23:55	37.5	39.5	44.0	46.0	47.5	
59	Ed Rau Road & Core Road	9/14/89	15:32	29.5	32.0	38.0	34.5	48.0	46
		9/15/89	09:11	44.5	46.3	51.5	48.3	57.8	
		9/20/89	23:36	34.5	36.5	40.0	37.5	44.5	
60	Franklin and Elliot Ranch Road	9/14/89	15:59	35.0	40.0	48.5	48.0	68.0	52
		9/15/89	08:47	46.5	49.5	54.5	52.9	72.0	
		9/21/89	00:15	36.0	38.5	45.5	42.5	54.5	

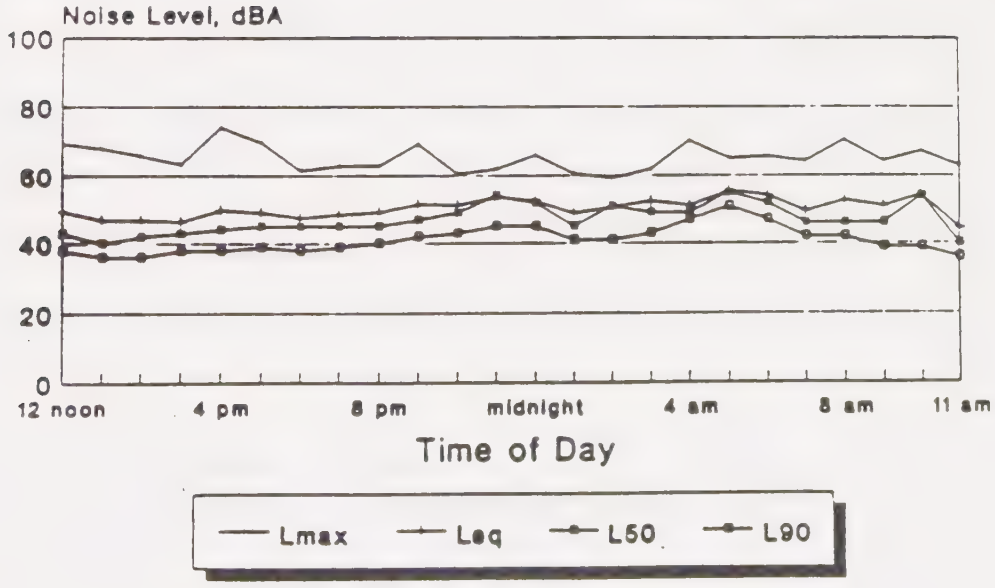
FIGURE D-1

Measured Ambient Noise Levels
9443 Polhumus Drive
July 26-27, 1989



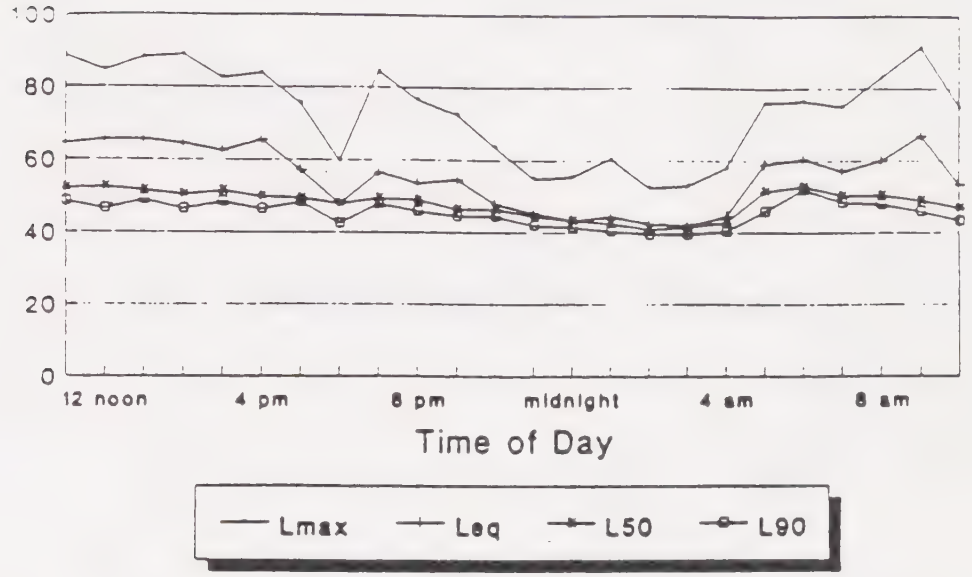
Site 1

Measured Ambient Noise Levels
12505 Lee School Road
July 26-27, 1989



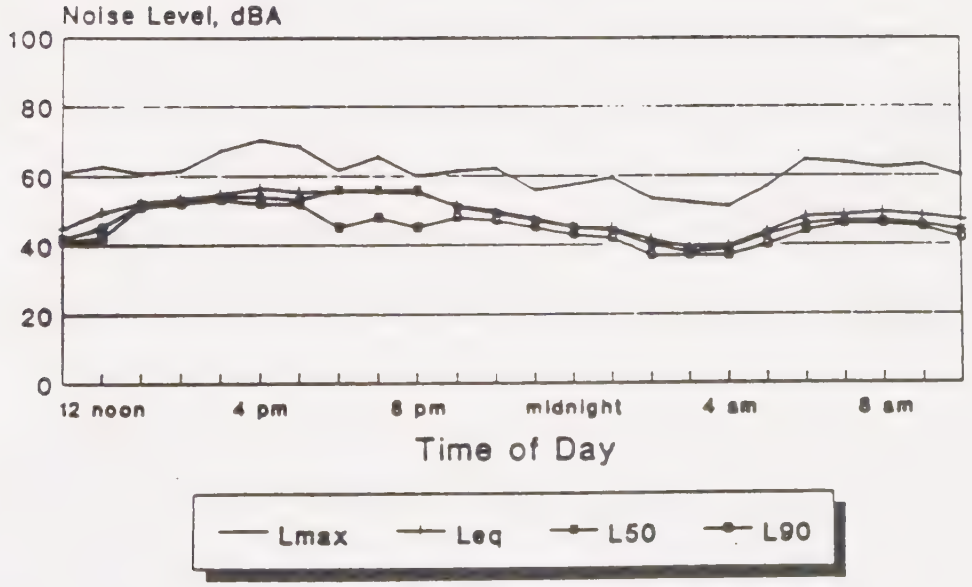
Site 2

Measured Ambient Noise Levels
4364 Oxwood Way
July 26-27, 1989



Site 3

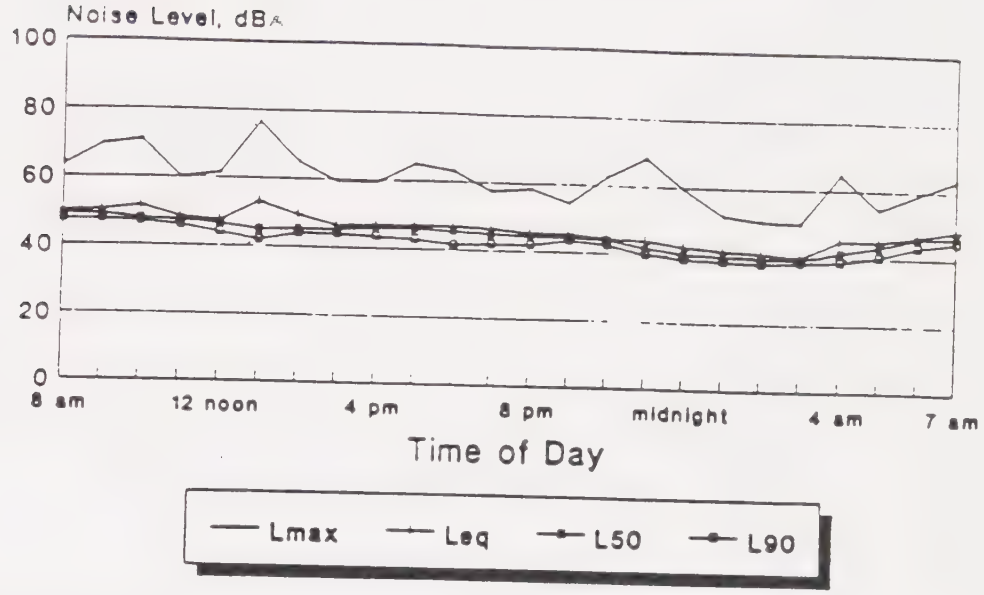
Measured Ambient Noise Levels
4601 Rustic Road
July 24-25, 1989



Site 4

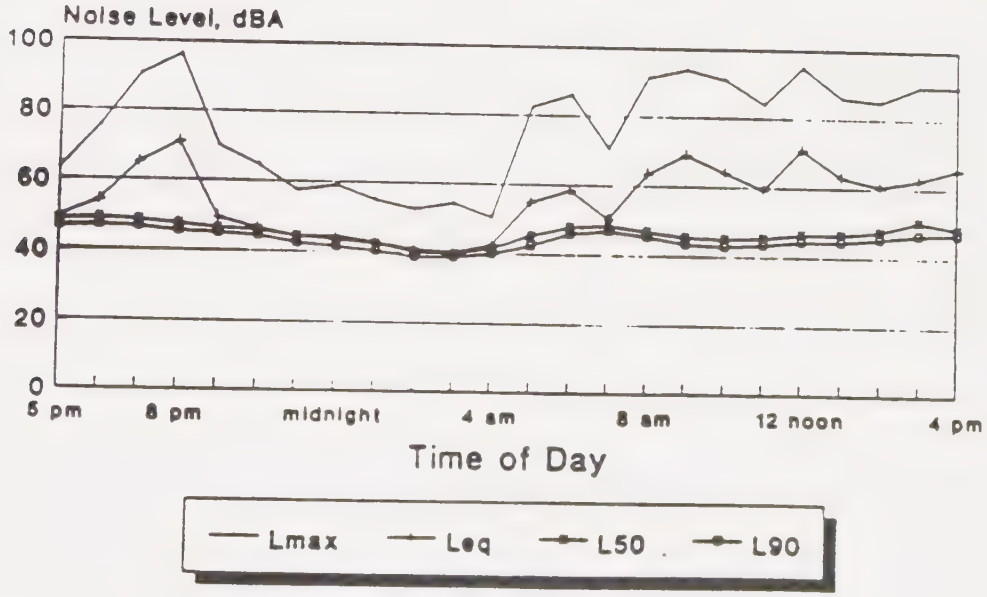
FIGURE D-1

Measured Ambient Noise Levels
1141 La Sierra Drive
July 11-12, 1989



Site 5

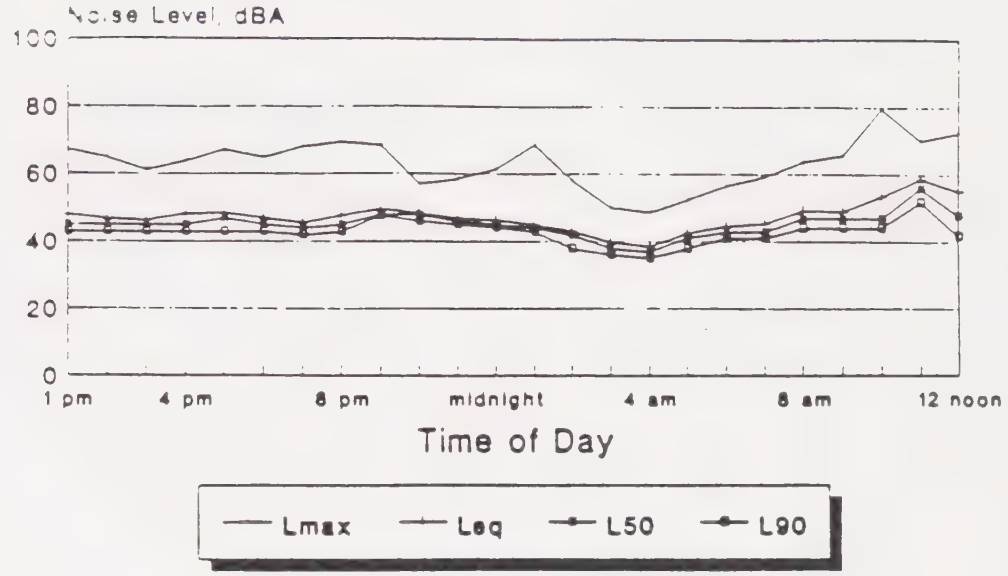
Measured Ambient Noise Levels
2740 Lerwick Road
July 12-13, 1989



Site 6

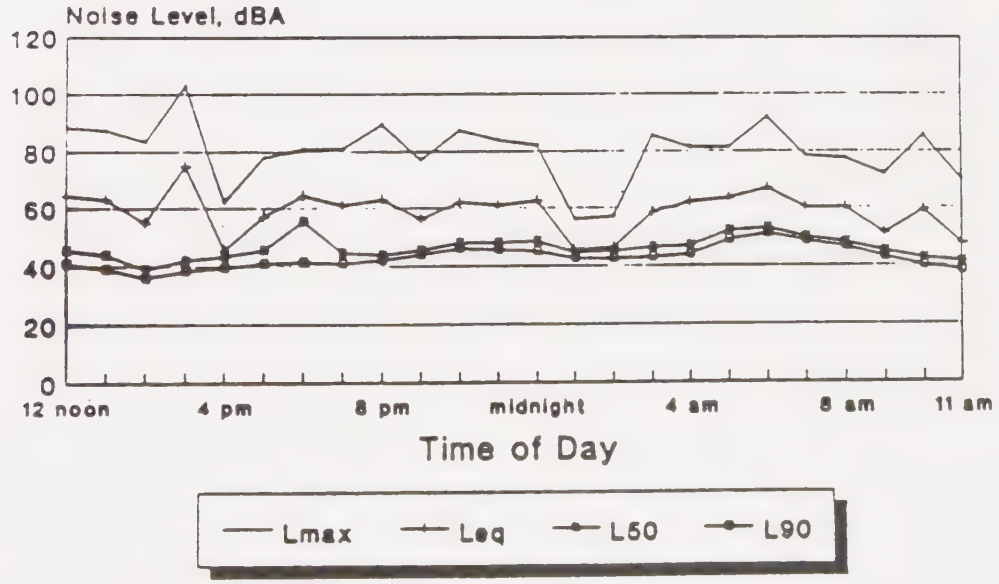
FIGURE D-1

Measured Ambient Noise Levels
9478 Central Avenue
July 28-29, 1989



Site 7

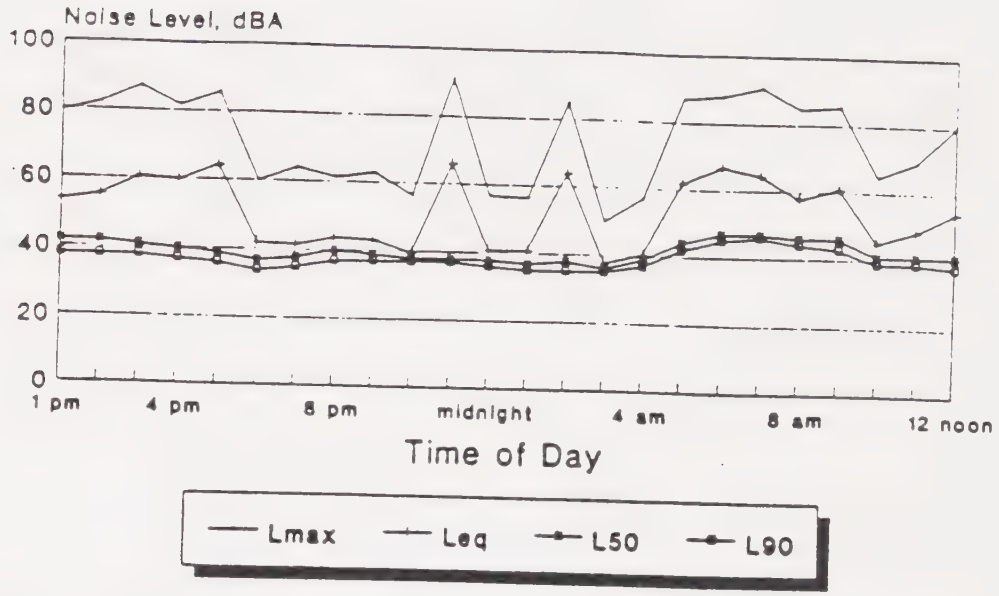
Measured Ambient Noise Levels
7504 Chicory Court
July 24-25, 1989



Site 8

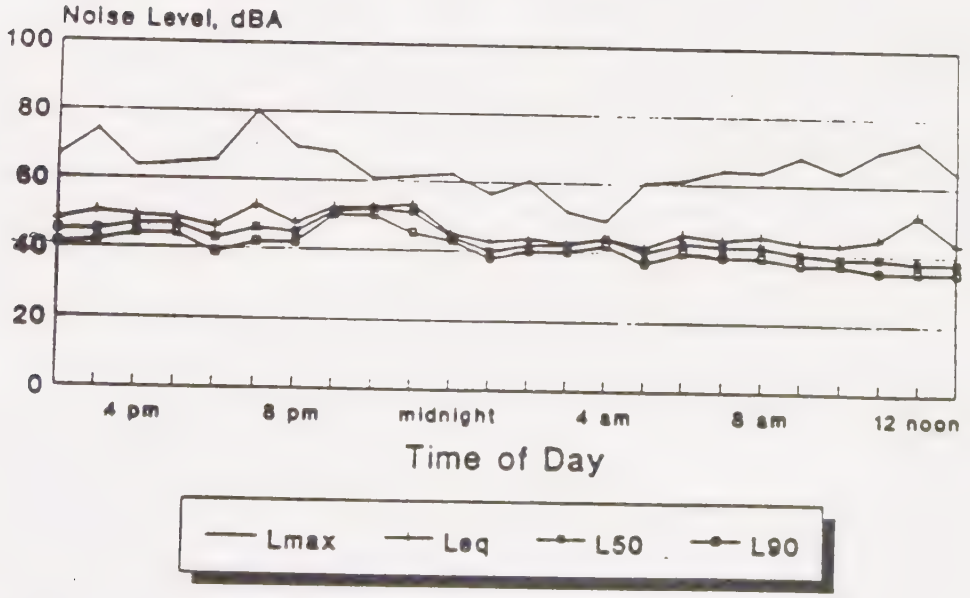
FIGURE D-1

Measured Ambient Noise Levels
6105 West 6th Street
July 24-25, 1989



Site 9

Measured Ambient Noise Levels
310 B Street, Isleton
July 26-27, 1989



Site 10

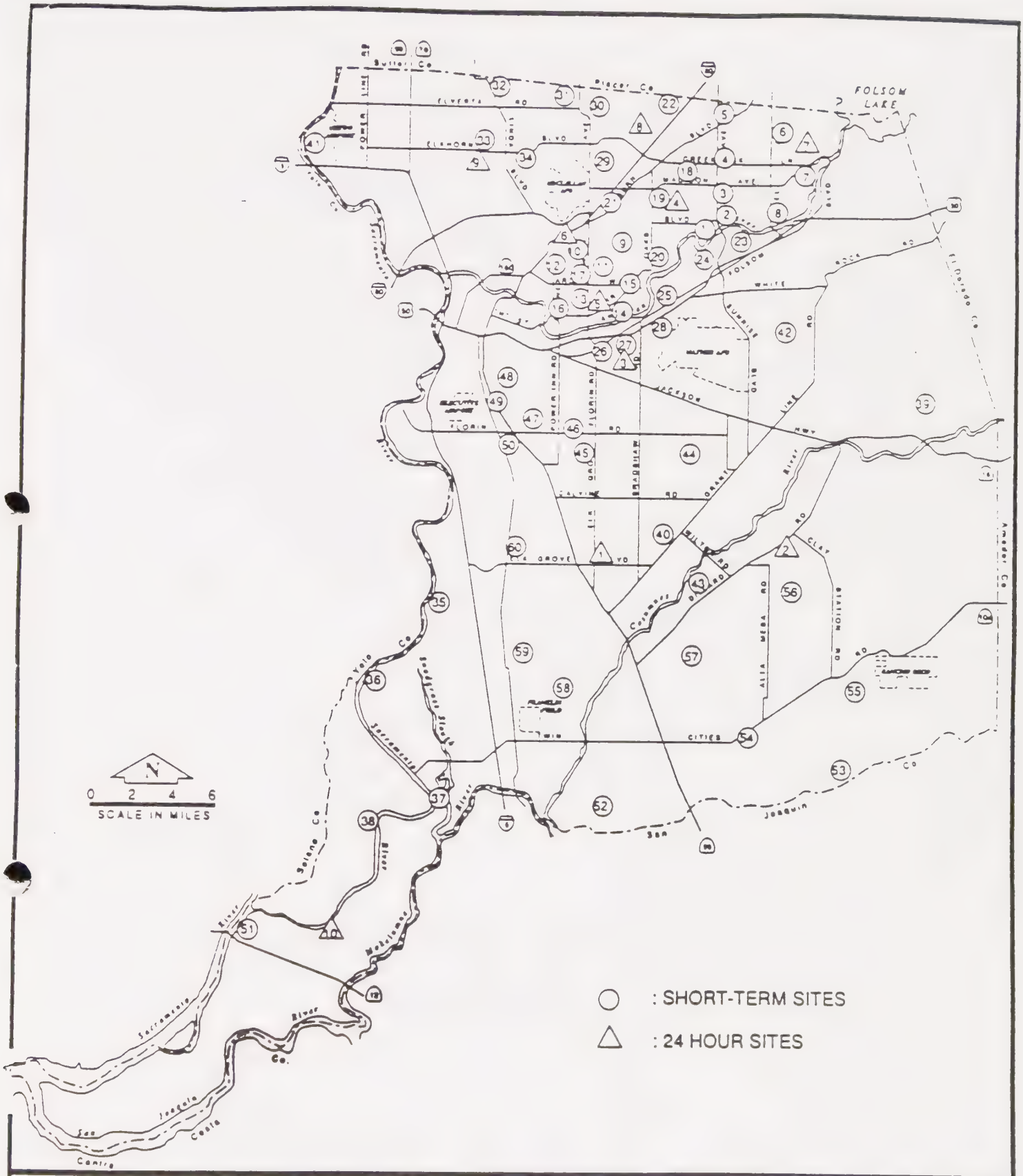


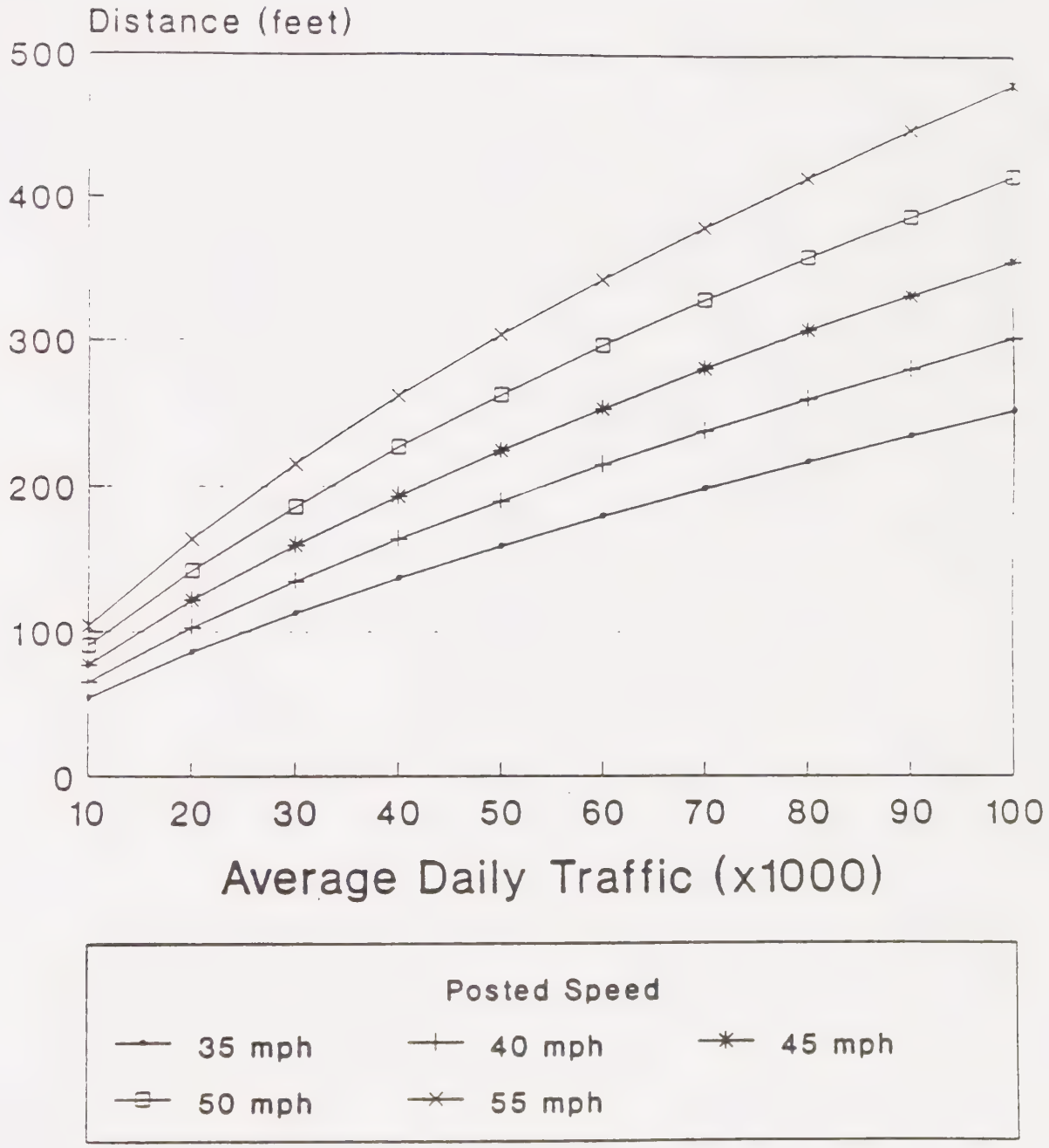
FIGURE D-2

COMMUNITY NOISE MONITORING LOCATIONS

Prepared by the Sacramento County Planning and Community Development Department

FIGURE D-3

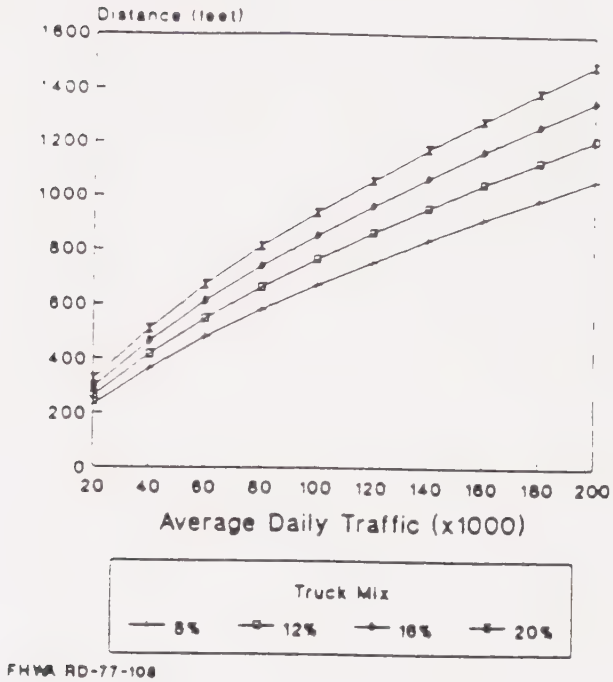
Distance to 65 dB Ldn Contour
Arterial Traffic



FHWA RD-77-108

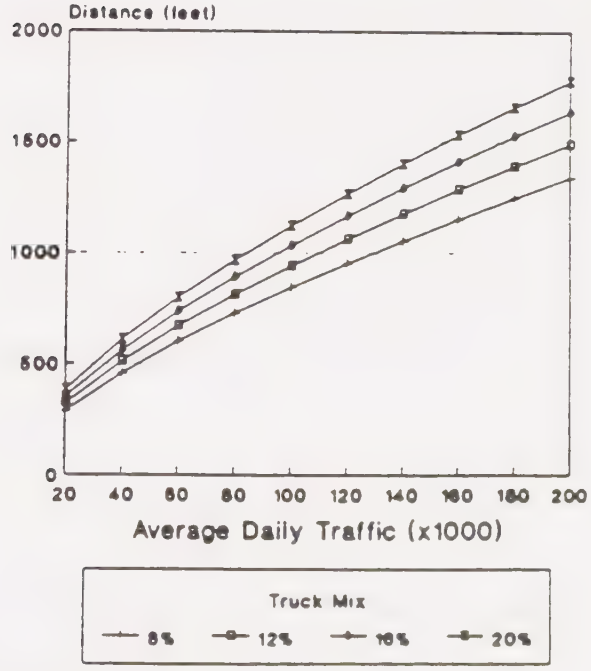
FIGURE D-3

Distance to 65 dB Ldn Contour
Freeway Traffic at 55 mph



FHWA RD-77-108

Distance to 65 dB Ldn Contour
Freeway Traffic at 65 mph



FHWA RD-77-108

APPENDIX E
SACRAMENTO REGIONAL AIRPORT LAND USE COMMISSION

CONCENTRATIONS OF PERSONS PER ACRE STANDARD

Uses are compatible if they do not result in a gathering of individuals in an area that would result in an average density of greater than 25 persons per acre per hour during a 24-hour period, not to exceed 50 persons per acre at any time.

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1. AVERAGE DENSITY STANDARD

Average densities in an area of persons per acre per hour during a 24-hour period are calculated as follows:

a. Define area where people will gather. For a building it is the area covered by the ground floor. For outside areas, it is the area where people will normally be present.

b. Calculate size of area in acres. If acres are not known, divide area size in square feet by 43,560 (one acre = 43,560 square feet).

c. Determine the number of persons expected in the area during each hour of operation and add each hour for a cumulative persons per 24-hour total.

d. Divide cumulative hourly persons by 24 to determine area average hourly density during 24-hour period.

e. Divide area average hourly density during 24-hour period by area size in acres to determine area average density per acre per hour during 24-hour period.

Example: A project site of 1.1 acres with a 20,000 square foot office building operating 8 hours a day, with 30 persons expected during each hour of operation.

- Area where people gather is office building
- 20,000 + 43,560 = 0.459 acres area of persons concentration
- 30 persons per hour X 8 = 240 hourly persons
- 240 + 24-hours = 10 persons per hour average during 24-hours
- 10 + 0.459 = 21.8 persons per acre per hour average density during 24 hour period

2. 50 PERSONS PER ACRE STANDARD

Highest persons per acre in an area is calculated as follows:

a. Determine highest number of person expected in an area at any time during 24-hour period.

b. Determine size of area in acres.

c. Divide highest number of persons expected by size of area in acres.

Example: Using some example, a project site of 1.1 acres with a 20,000 square foot office building, with 30 persons expected during each hour of operation.

- 30 is maximum number of persons in area at any time
- 20,000 + 43,560 = 0.459
- 30 + 0.459 = 65.4 persons per acre highest expected at any time

The example project meets the 25 persons per acre per hour over 24-hours standard, at 21.8; however, the project exceeds the 50 persons per acre at any time maximum, at 65.4. This project is incompatible.

Example: A project site of 1.8 acres with a 40,000 square foot high technology repair facility operating 24-hours per day. There are three shifts of 8-hours each. Day shift has 40 workers, swing shift has 30 workers, and night shift has 20 workers. No customers come to the facility.

- Area where people gather is repair facility
- 40,000 + 43,560 = 0.92 acres
- 8 X 40 = 320, 8 X 30 = 240, 8 X 20 = 160 Total = 720 hourly persons
- 720 + 24 hours = 30 persons per hour average density over 24-hours
- 30 + 0.92 = 32.6 persons per acre per hour average density during 24-hour period

and

- 40 workers maximum number of persons in area at any time
- 0.92 acres size of area
- 40 + 0.92 = 43.5 persons per acre maximum at any time

The proposed project does not exceed the 50 persons per acre at any time standard; however, at 32.6 average persons per acre per hour over 24-hours, it exceeds the standard of 25. This project is incompatible.

Example: A project site of 3 acres with a 60,000 square foot (400' X 150') wholesale fruit-vegetable distribution center, including truck loading docks for 25 trucks. The center operates 18-hours per day. For 6-hours there are 10 workers in the area and for 12-hours there are 75 workers and 25 truck drivers in the area.

- Area where people gather is distribution center, including loading docks
- 60,000 + 43,560 = 1.38 acres
- 6-hours X 10 persons = 60, 12-hours X 100 persons = 1,200 Total = 1,260 hourly persons
- 1,260 + 24 = 52.5 persons per hour average density over 24 hours
- 52.5 + 1.38 = 38.0 persons per acre per hour average density during 24 hour period

and

- 100 maximum number of persons in area at any time
- 1.38 acres size of area
- 100 + 1.38 = 72.5 persons per acre maximum at any time

The proposed project exceeds the 50 persons per acre at any time standard and the 25 persons per acre per hour average over 24-hours. The project is incompatible.

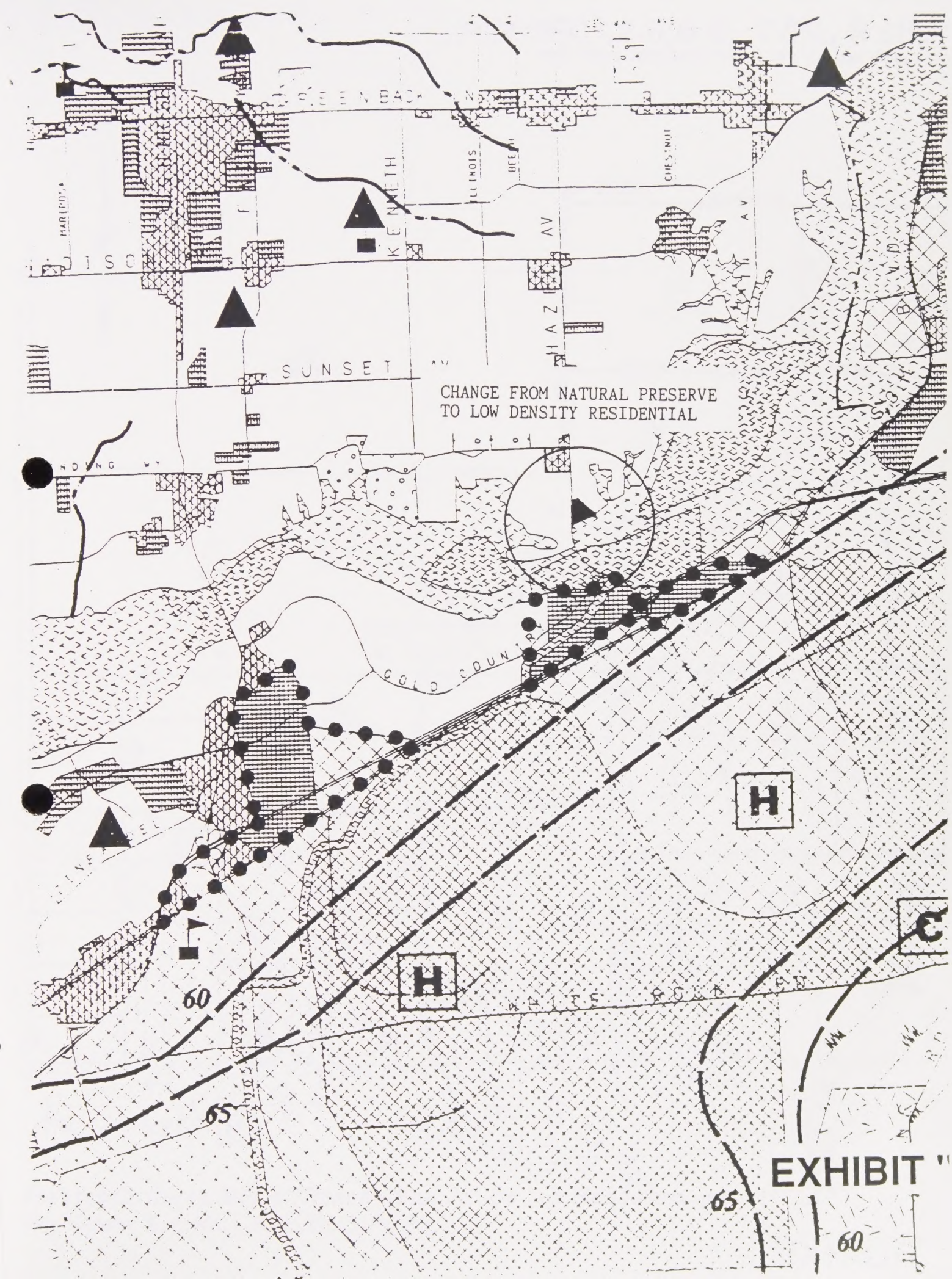
SUNSET
CHANGE FROM NATURAL PRESERVE
TO LOW DENSITY RESIDENTIAL
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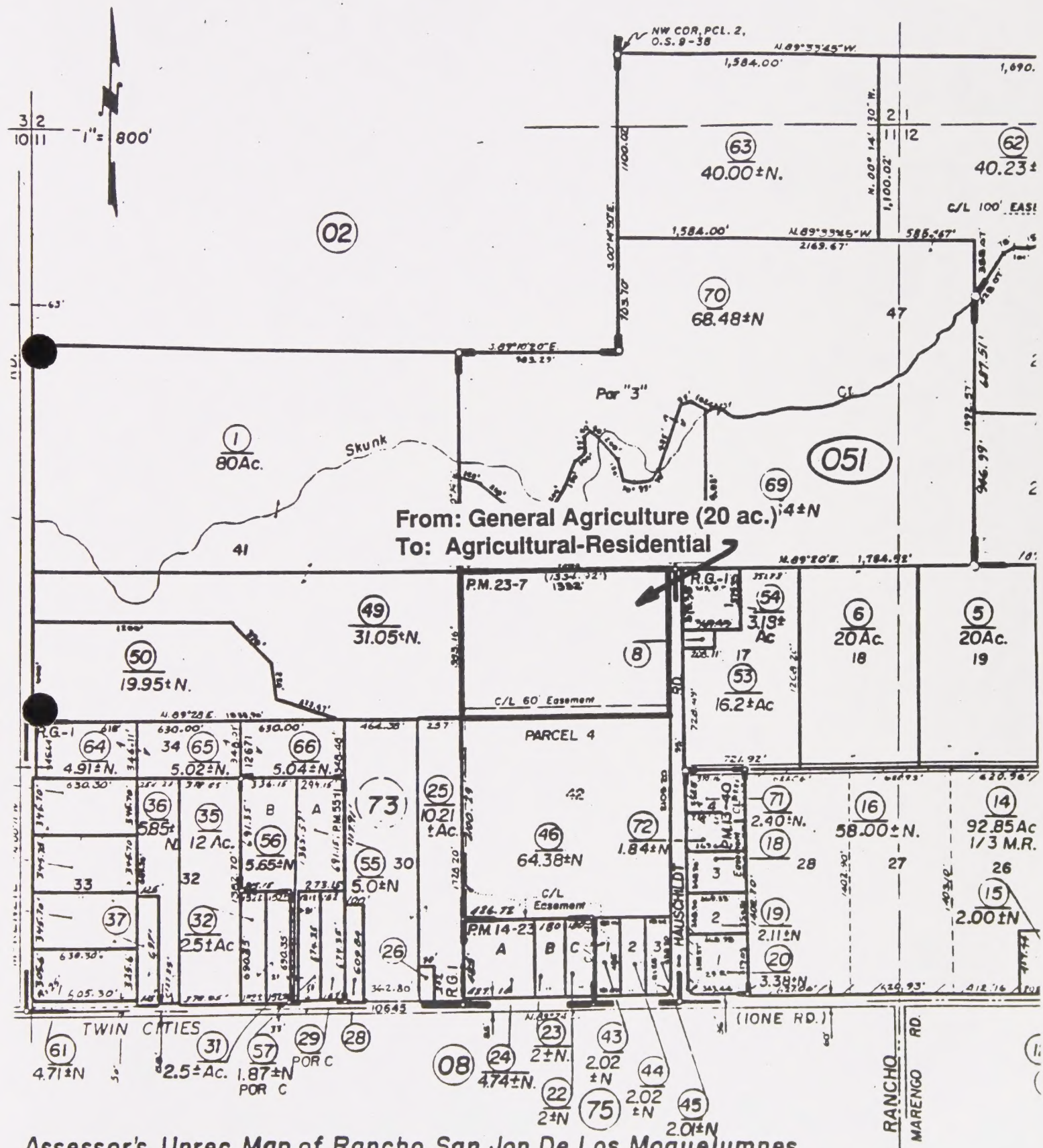
EXHIBIT "

POR. SEC. 1, 2, 11, & 12, T. 5N., R. 6E., I

(POR. PROJ. INTO RANCHO SAN JON DE LOS MOQUELUI



Assessor's Unrec. Map of Rancho San Jon De Los Moquelumnes

Ray Gower Sub. No. 1, R.M. Bk. 13, Pg. 29

EXHIBIT '